USER MANUAL

DIR-615

VERSION 7.05

D-Link®

WIRELESS

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Package Contents

- D-Link DIR-615 Wireless Router
- Power Adapter
- Ethernet Cable
- Manual on CD
- Warranty Card

Note: Using a power supply with a different voltage than the one included with the DIR-615 will cause damage and void the warranty for this product.

Note: Always attach the power cord plug to the power supply, before inserting the power cord and connected power supply to the wall outlet.

System Requirements

- Ethernet-based Cable or DSL Modem
- Computers with Windows®, Macintosh®, or Linux-based operating systems with an installed Ethernet adapter
- Internet Explorer 6 or Firefox 2.0 or above (for configuration)

Features

- **Faster Wireless Networking** - The DIR-615 provides up to 300Mbps* wireless connection with other 802.11n wireless clients. This capability allows users to participate in real-time activities online, such as video streaming, online gaming, and real-time audio.

- **Compatible with 802.11b and 802.11g Devices** - The DIR-615 is still fully compatible with the IEEE 802.11b and IEEE 802.11g standard, so it can connect with existing 802.11b and IEEE 802.11g PCI, USB and Cardbus adapters.

- **Advanced Firewall Features** - The Web-based user interface displays a number of advanced network management features including:

    - **Content Filtering** - Easily applied content filtering based on MAC Address, URL, and/or Domain Name.

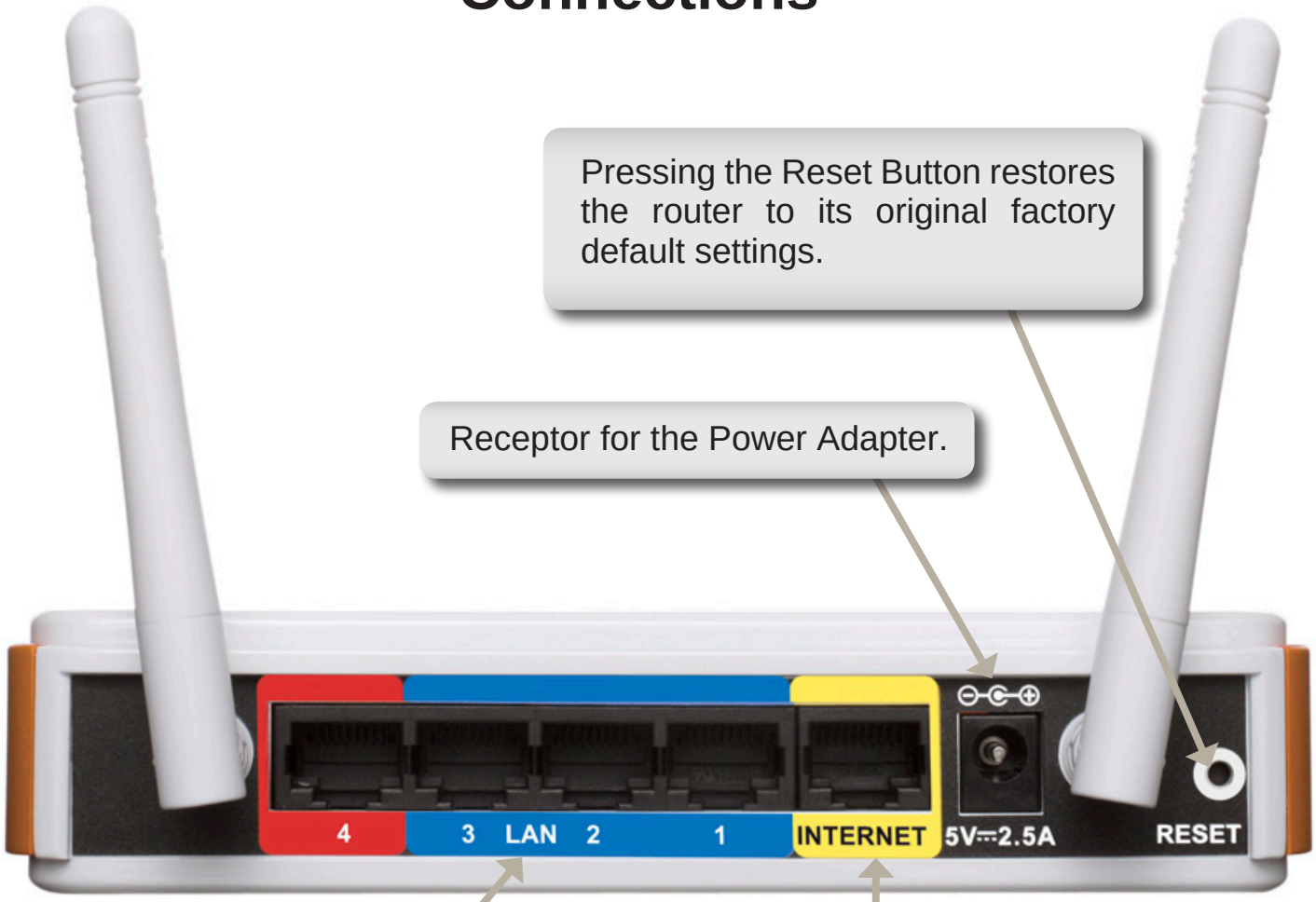
    - **Filter Scheduling** - These filters can be scheduled to be active on certain days or for a duration of hours or minutes.

    - **Secure Multiple/Concurrent Sessions** - The DIR-615 can pass through VPN sessions. It supports multiple and concurrent IPSec and PPTP sessions, so users behind the DIR-615 can securely access corporate networks.

- **User-friendly Setup Wizard** - Through its easy-to-use Web-based user interface, the DIR-615 lets you control what information is accessible to those on the wireless network, whether from the Internet or from your company's server. Configure your router to your specific settings within minutes.

* Maximum wireless signal rate derived from IEEE Standard 802.11g and Draft 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental conditions will adversely affect wireless signal range.

Hardware Overview
Connections

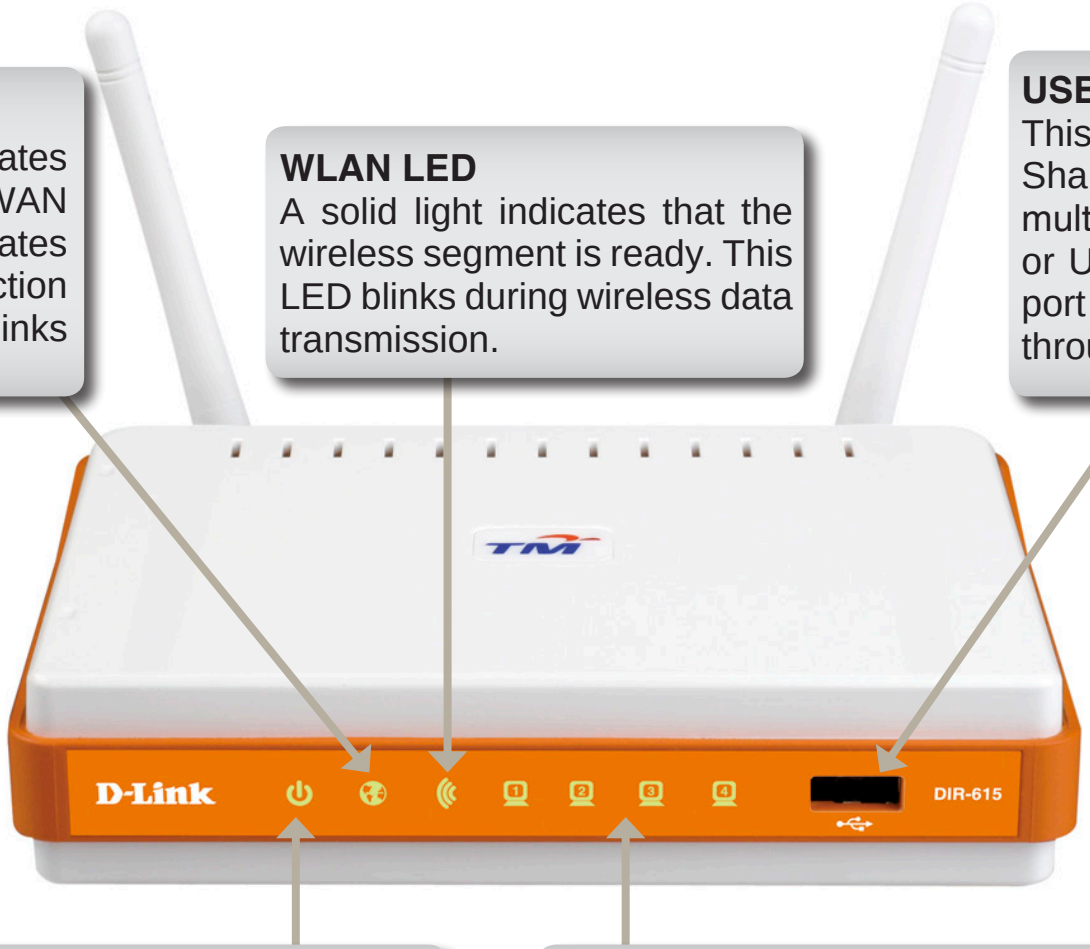

Pressing the Reset Button restores the router to its original factory default settings.
Receptor for the Power Adapter.
4
3
LAN
2
1
INTERNET
5V⎓2.5A
RESET
LAN Ports
Connect Ethernet devices such as computers, switches, and hubs.
The Auto MDI/MDIX WAN port is the connection for the Ethernet cable to the Cable or DSL modem.

Hardware Overview
LEDs and USB Port

WAN
A solid green light indicates the connection on the WAN port. An amber light indicates that the Internet connection has failed. This LED blinks during data transmission.

WLAN LED
A solid light indicates that the wireless segment is ready. This LED blinks during wireless data transmission.

USB Port
This USB port supports D-Link SharePort function. Connect a multi-function printer, scanner, or USB storage device to the port and share the device throught the network.



Power LED
A solid green light indicates a proper connection to the power supply. A blinking amber light indicates the device is booting up.

Local Network LEDs
A solid light indicates a connection to an Ethernet-enabled device on ports 1-4. This LED blinks during data transmission.

Installation

This section will walk you through the installation process. Placement of the router is very important. Do not place the router in an enclosed area such as a closet, cabinet, or in the attic or garage.

Before you Begin

Please configure the router with the computer that was last connected directly to your modem. Also, you can only use the Ethernet port on your modem. If you were using the USB connection before using the router, then you must turn off your modem, disconnect the USB cable and connect an Ethernet cable to the WAN port on the router, and then turn the modem back on. In some cases, you may need to call your ISP to change connection types (USB to Ethernet).

If you have DSL and are connecting via PPPoE, make sure you disable or uninstall any PPPoE software such as WinPoet, Broadjump, or Ethernet 300 from your computer or you will not be able to connect to the Internet.

Wireless Installation Considerations

The D-Link wireless router lets you access your network using a wireless connection from virtually anywhere within the operating range of your wireless network. Keep in mind, however, that the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through, may limit the range. Typical ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or business. The key to maximizing wireless range is to follow these basic guidelines:

1. Keep the number of walls and ceilings between the D-Link router and other network devices to a minimum - each wall or ceiling can reduce your adapter's range from 3-90 feet (1-30 meters.) Position your devices so that the number of walls or ceilings is minimized.

2. Be aware of the direct line between network devices. A wall that is 1.5 feet thick (.5 meters), at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle it looks over 42 feet (14 meters) thick! Position devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.

3. Building Materials make a difference. A solid metal door or aluminum studs may have a negative effect on range. Try to position access points, wireless routers, and computers so that the signal passes through drywall or open doorways. Materials and objects such as glass, steel, metal, walls with insulation, water (fish tanks), mirrors, file cabinets, brick, and concrete will degrade your wireless signal.

4. Keep your product away (at least 3-6 feet or 1-2 meters) from electrical devices or appliances that generate RF noise.

5. If you are using 2.4GHz cordless phones or X-10 (wireless products such as ceiling fans, lights, and home security systems), your wireless connection may degrade dramatically or drop completely. Make sure your 2.4GHz phone base is as far away from your wireless devices as possible. The base transmits a signal even if the phone in not in use.

Wall Mounting Your Device

You can mount the DIR-615 to a wall or a partition for easy and convenient placement of your device.

To wall mount your device,

A. Screw the provided screws with the equipment to the wall or partition where the device to be placed.
B. Place the mounting holes on the bottom of the device over the screws to mount it to the wall or partition.
C. Connect your cables to the device.

Step A

Step B

Step C

Connect to Cable/DSL/Satellite Modem

If you are connecting the router to a cable/DSL/satellite modem, please follow the steps below:

1. Place the router in an open and central location. Do not plug the power adapter into the router.

2. Turn the power off on your modem. If there is no on/off switch, then unplug the modem's power adapter. Shut down your computer.

3. Unplug the Ethernet cable (that connects your computer to your modem) from your computer and place it into the WAN port on the router.

4. Plug an Ethernet cable into one of the four LAN ports on the router. Plug the other end into the Ethernet port on your computer.

5. Turn on or plug in your modem. Wait for the modem to boot (about 30 seconds).

6. Plug the power adapter to the router and connect to an outlet or power strip. Wait about 30 seconds for the router to boot.

7. Turn on your computer.

8. Verify the link lights on the router. The power light, WAN light, and the LAN light (the port that your computer is plugged into) should be lit. If not, make sure your computer, modem, and router are powered on and verify the cable connections are correct.

9. Skip to page 16 to configure your router.

Connect to Another Router

If you are connecting the D-Link router to another router to use as a wireless access point and/or switch, you will have to do the following before connecting the router to your network:

- Disable UPnP™
- Disable DHCP
- Change the LAN IP address to an available address on your network. The LAN ports on the router cannot accept a DHCP address from your other router.

To connect to another router, please follow the steps below:

1. Plug the power into the router. Connect one of your computers to the router (LAN port) using an Ethernet cable. Make sure your IP address on the computer is 192.168.0.xxx (where xxx is between 2 and 254). Please see the **Networking Basics** section for more information. If you need to change the settings, write down your existing settings before making any changes. In most cases, your computer should be set to receive an IP address automatically in which case you will not have to do anything to your computer.

2. Open a web browser and enter **http://192.168.0.1** and press **Enter**. When the login window appears, set the user name to **admin** and leave the password box empty. Click **OK** to continue.

3. Click on **Advanced** and then click **Advanced Network**. Uncheck the Enable UPnP checkbox. Click **Save Settings** to continue.

4. Click **Setup** and then click **Network Settings**. Uncheck the Enable DHCP Server server checkbox. Click **Save Settings** to continue.

5. Under Router Settings, enter an available IP address and the subnet mask of your network. Click **Save Settings** to save your settings. Use this new IP address to access the configuration utility of the router in the future. Close the browser and change your computer's IP settings back to the original values as in Step 1.

6. Disconnect the Ethernet cable from the router and reconnect your computer to your network.

7. Connect an Ethernet cable in one of the LAN ports of the router and connect it to your other router. Do not plug anything into the WAN port of the D-Link router.

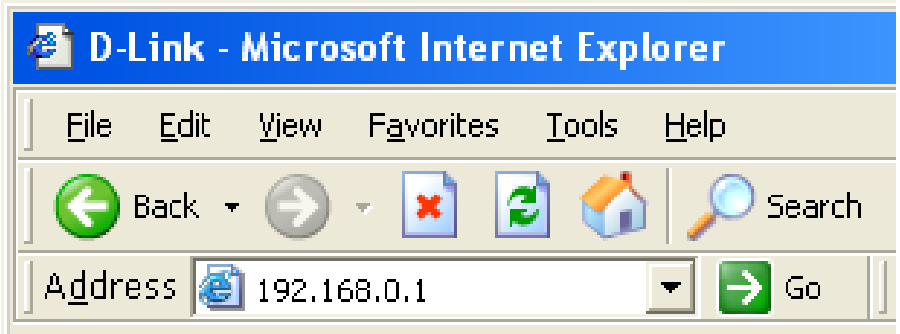
8. You may now use the other three LAN ports to connect other Ethernet devices and computers. To configure your wireless network, open a web browser and enter the IP address you assigned to the router. Refer to the **Configuration** and **Wireless Security** sections for more information on setting up your wireless network.

Configuration

This section will show you how to configure your new D-Link wireless router using the web-based configuration utility.

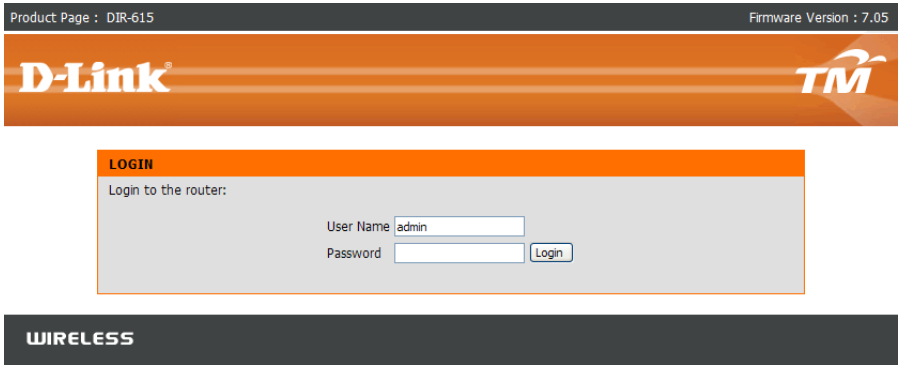
Web-based Configuration Utility

To access the configuration utility, open a web-browser such as Internet Explorer and enter the IP address of the router (192.168.0.1).



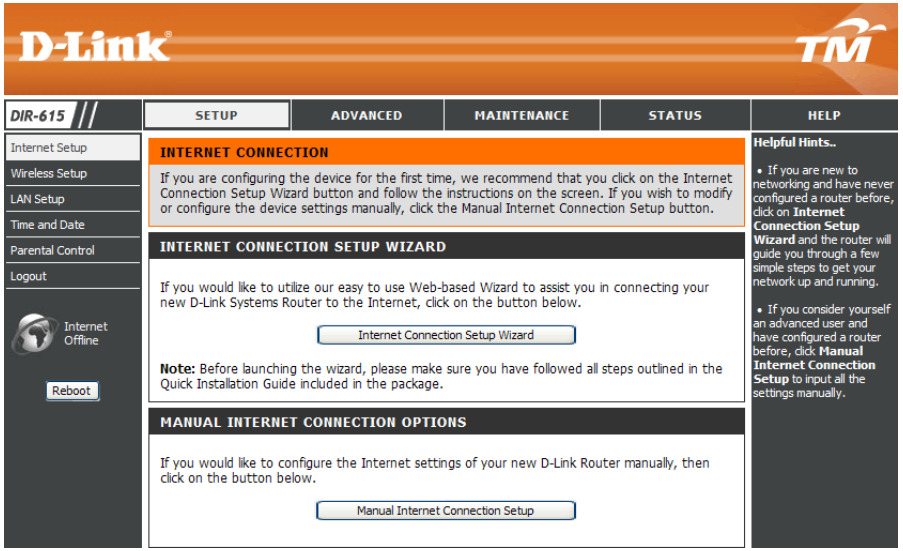
Type "*admin*" for the User Name and leave the field blank in the Password field. Leave the password blank by default.

If you get a **Page Cannot be Displayed** error, please refer to the **Troubleshooting** section for assistance.

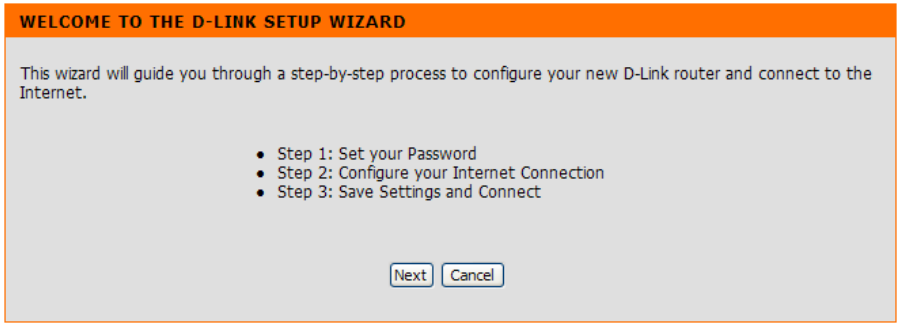


Setup Wizard

You may run the setup wizard from the opening Internet Setup window to quickly set up your router. Click **Internet Connection Setup Wizard**, and the first window of the wizard will open.


D-Link
DIR-615
SETUP
ADVANCED
MAINTENANCE
STATUS
HELP
Internet Setup
Wireless Setup
LAN Setup
Time and Date
Parental Control
Logout
Internet Offline
Reboot
INTERNET CONNECTION
If you are configuring the device for the first time, we recommend that you click on the Internet Connection Setup Wizard button and follow the instructions on the screen. If you wish to modify or configure the device settings manually, click the Manual Internet Connection Setup button.
INTERNET CONNECTION SETUP WIZARD
If you would like to utilize our easy to use Web-based Wizard to assist you in connecting your new D-Link Systems Router to the Internet, click on the button below.
Internet Connection Setup Wizard
Note: Before launching the wizard, please make sure you have followed all steps outlined in the Quick Installation Guide included in the package.
MANUAL INTERNET CONNECTION OPTIONS
If you would like to configure the Internet settings of your new D-Link Router manually, then click on the button below.
Manual Internet Connection Setup
Helpful Hints..
• If you are new to networking and have never configured a router before, click on Internet Connection Setup Wizard and the router will guide you through a few simple steps to get your network up and running.
• If you consider yourself an advanced user and have configured a router before, click Manual Internet Connection Setup to input all the settings manually.

Click **Next** to continue.


WELCOME TO THE D-LINK SETUP WIZARD
This wizard will guide you through a step-by-step process to configure your new D-Link router and connect to the Internet.
• Step 1: Set your Password
• Step 2: Configure your Internet Connection
• Step 3: Save Settings and Connect
Next
Cancel

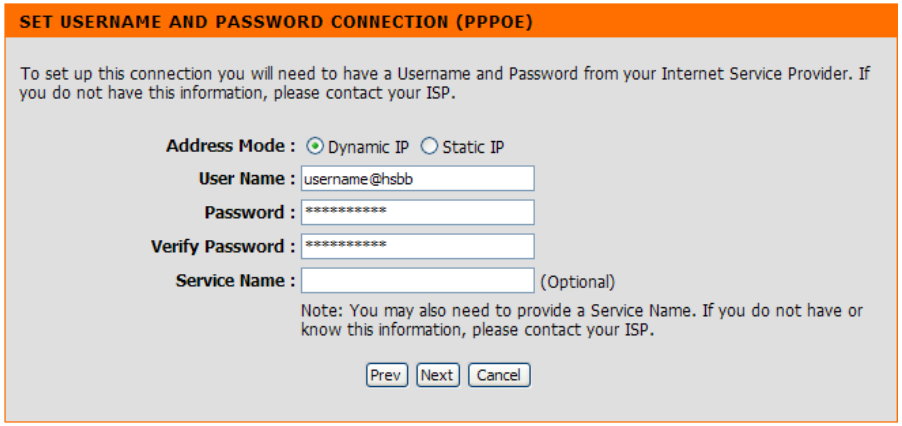
Create a new password, and then click **Next** to continue.

STEP 1: SET YOUR PASSWORD
By default, your new D-Link Router does not have a password configured for administrator access to the Web-based configuration pages. To secure your new networking device, please set and verify a password below:
Password :
Confirm Password:
Prev
Next
Cancel

Select the type of Internet connection you use and then configure the information below.

If clicking the **Dynamic IP Address** radio button, enter the username in the **User Name** field and password in **Password** and **Verify Password** fields.

The **Service Name** is optional but may be required by some ISPs.

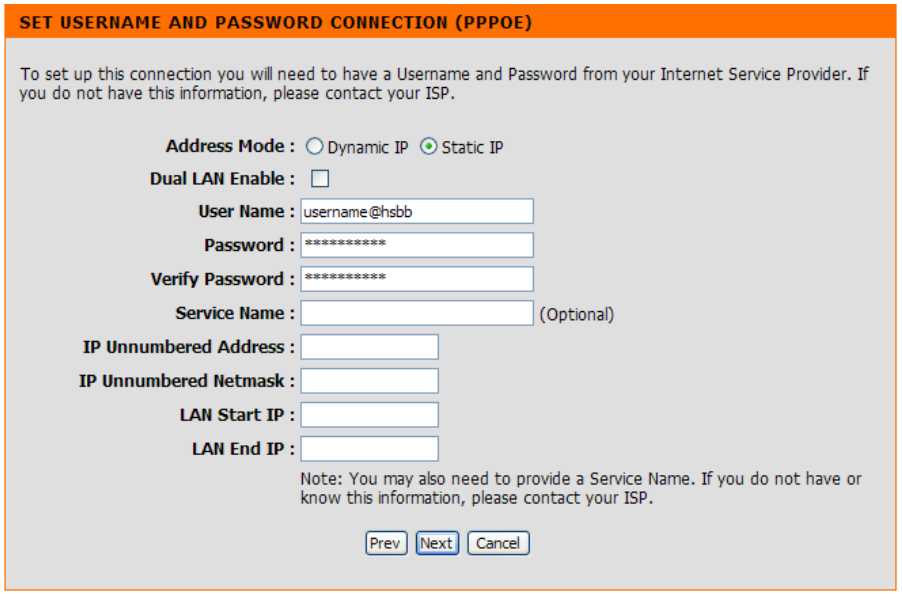

SET USERNAME AND PASSWORD CONNECTION (PPPOE)
To set up this connection you will need to have a Username and Password from your Internet Service Provider. If you do not have this information, please contact your ISP.
Address Mode : Dynamic IP Static IP
User Name : username@hsbb
Password : **********
Verify Password : **********
Service Name : (Optional)
Note: You may also need to provide a Service Name. If you do not have or know this information, please contact your ISP.
Prev Next Cancel

If clicking the **Static IP** radio button, enter the username in the **User Name** field and password in **Password** and **Verify Password** fields. Tick the **Dual LAN Enable** check box to enable IP unnumbered on LAN (1-3) interface, and NAT on Wireless Interface.

The **Service Name** is optional but may be required by some ISPs.

Enter the static IP address and its subnet mask in the **IP Unnumbered Address** and **IP Unnumbered Netmask**. After that enter the start and end LAN IP address in the fields.

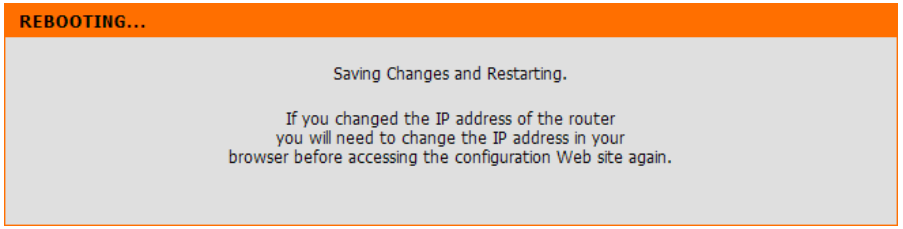
Click **Next** to continue.


SET USERNAME AND PASSWORD CONNECTION (PPPOE)
To set up this connection you will need to have a Username and Password from your Internet Service Provider. If you do not have this information, please contact your ISP.
Address Mode : Dynamic IP Static IP
Dual LAN Enable :
User Name : username@hsbb
Password : **********
Verify Password : **********
Service Name : (Optional)
IP Unnumbered Address :
IP Unnumbered Netmask :
LAN Start IP :
LAN End IP :
Note: You may also need to provide a Service Name. If you do not have or know this information, please contact your ISP.
Prev Next Cancel

Click **Wireless Connection Setup Wizard** to open the wizard window of configuring wireless connection. Click **Reboot** to directly restart the Router.

REBOOT THE DEVICE OR RUN THE WIRELESS CONNECTION SETUP WIZARD
Click the Reboot button to reboot the router or click the Wireless Connection Setup Wizard button to start the Wireless Connection Setup Wizard
Prev
Wireless Connection Setup Wizard
Reboot
Cancel

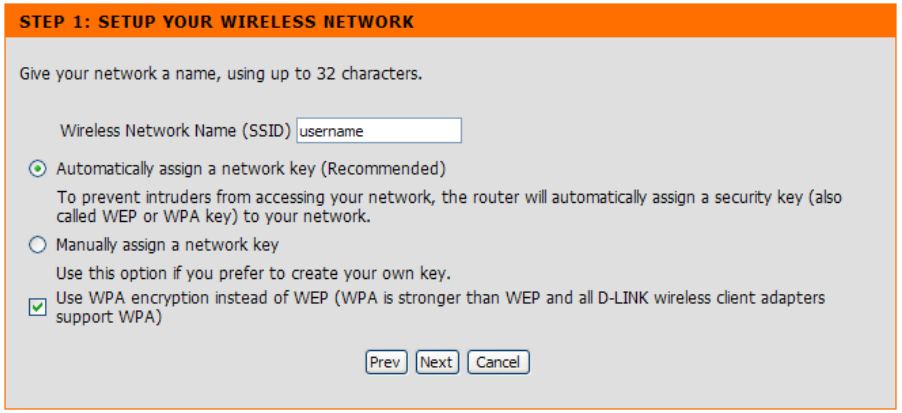
If clicking **Reboot**, the Router will save the new settings and reboot. Please allow 1-2 minutes for rebooting. When the router has finished rebooting, the opening window will be displayed.


REBOOTING...
Saving Changes and Restarting.
If you changed the IP address of the router
you will need to change the IP address in your
browser before accessing the configuration Web site again.

If clicking **Wireless Connection Setup Wizard**, this window will open. Click **Next** to continue.

WELCOME TO THE D-LINK WIRELESS SECURITY SETUP WIZARD
This wizard will guide you through a step-by-step process to setup your wireless network and make it secure.
Step 1: Setup your Wireless Network.
Step 2: Set your Wireless Security Password
Next
Cancel

Enter a Wireless Network Name, also known as SSID, in the text box. Click **Automatically assign a network key (Recommended)** or **Manually assing a network key** for the wireless security key, and use the check box to select the desired level of wireless security, WEP, WPA. and then click **Next** to continue.


STEP 1: SETUP YOUR WIRELESS NETWORK
Give your network a name, using up to 32 characters.
Wireless Network Name (SSID) username
Automatically assign a network key (Recommended)
To prevent intruders from accessing your network, the router will automatically assign a security key (also called WEP or WPA key) to your network.
Manually assign a network key
Use this option if you prefer to create your own key.
Use WPA encryption instead of WEP (WPA is stronger than WEP and all D-LINK wireless client adapters support WPA)
Prev
Next
Cancel

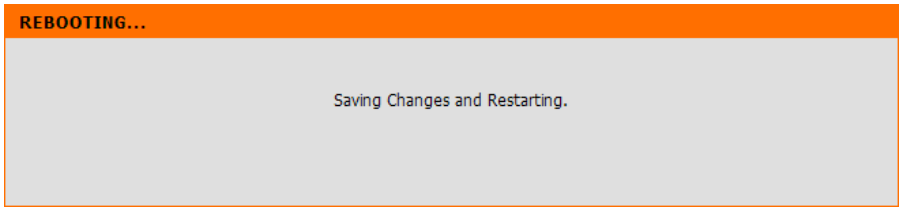
If selecting Manually assign a network key in the previous window, this window will open. Enter a wireless security password in the Network Key box. Click **Next** to continue.

STEP 2: SET YOUR WIRELESS SECURITY PASSWORD
You have selected your wireless security level - you will need to set a wireless security password.
The WPA (Wi-Fi Protected Access) key must meet one of following guidelines:
- Between 8 to 63 characters (A longer WPA key is more secure than a short one)
- Exactly 64 characters using 0-9 and A-F
Network Key :
Note: You will need to enter the same password that you created in this step into your wireless clients in order to enable proper wireless communication.
Prev
Next
Cancel

This window displays a summary of your wireless security settings. Please print this out or record this information in a safe place and then click **Save** to continue.

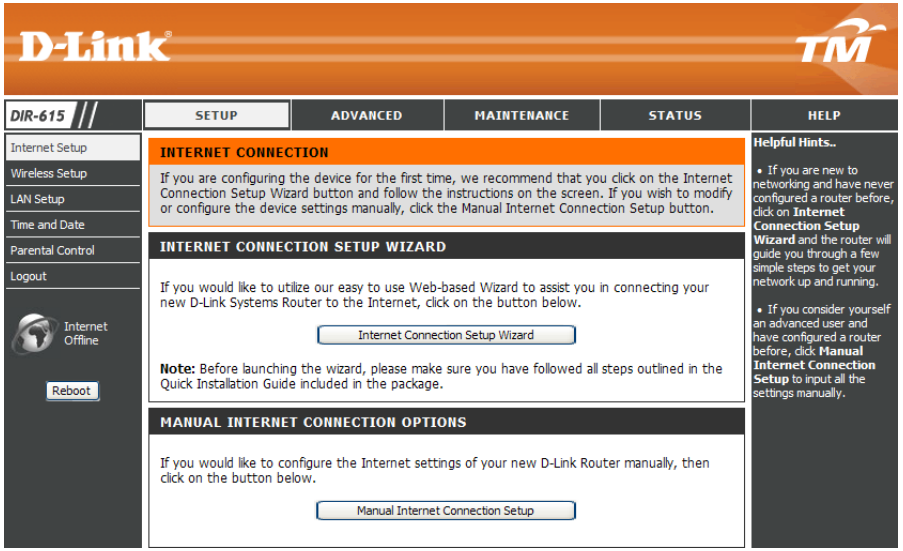
SETUP COMPLETE!
Below is a detailed summary of your wireless security settings. Please print this page out, or write down the information on a piece of paper, so you can configure the correct settings on your wireless client adapters.
Wireless Network Name (SSID) : username
Security Mode : Auto (WPA or WPA2) - Personal
Cipher Type : TKIP or AES
Network Key : nDvwwJhCgw
Note: In some smart wireless utilities (e.g. D-Link Wireless Utility or Wireless Zero Configuration), you only need to select a Wireless Network Name and enter a Network Key to access the Internet.
Prev
Save
Cancel

The Router will save the new settings and reboot. Please allow 1-2 minutes for rebooting. When the router has finished rebooting, the opening Wireless Setup window is displayed.



Internet Setup

If you want to configure the Router manually without using the wizard, click the **Manual Internet Connection Setup** button.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Internet Setup
Dynamic PPPoE

Click the **Dynamic PPPoE**(Point to Point Protocol over Ethernet) radio button to see the following configuration if your ISP uses dynamic PPPoE .

User Name: Enter your PPPoE user name.

Password: Enter your PPPoE password.

Confirm Password: Retype the password.

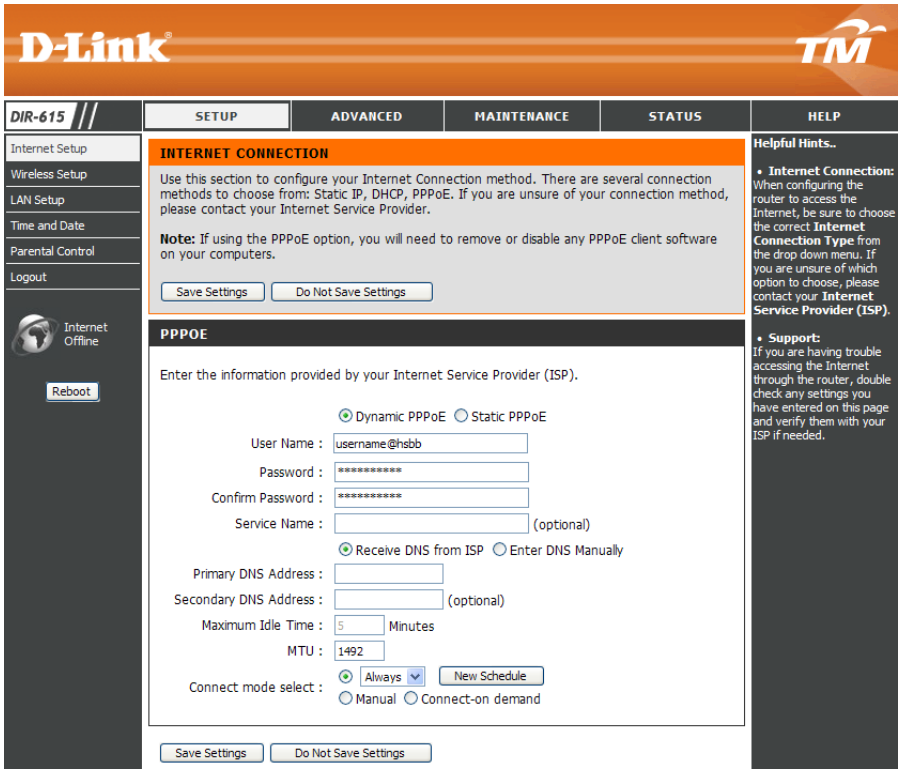
Service Name: Enter the ISP Service Name. The Service Name is optional but may be required by some ISPs.

DNS: Click **Recieve DNS from ISP** to get the DNS automatically. Click **Enter DNS Manually** to enter the DNS information below.

DNS Addresses: Enter the Primary and Secondary DNS Server Addresses.

Maximum Idle Time: Enter a maximum idle time during which the Internet connection is maintained during inactivity. To disable this feature, enable Auto-reconnect.

MTU: Maximum Transmission Unit - You may need to change the MTU for optimal performance with your specific ISP.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Internet Offline
Reboot
INTERNET CONNECTION
Use this section to configure your Internet Connection method. There are several connection methods to choose from: Static IP, DHCP, PPPoE. If you are unsure of your connection method, please contact your Internet Service Provider.
Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.
Save Settings
Do Not Save Settings
PPPOE
Enter the information provided by your Internet Service Provider (ISP).
Dynamic PPPoE
Static PPPoE
User Name :
username@hsbb
Password :
Confirm Password :
Service Name :
(optional)
Receive DNS from ISP
Enter DNS Manually
Primary DNS Address :
Secondary DNS Address :
(optional)
Maximum Idle Time :
5
Minutes
MTU :
1492
Connect mode select :
Always
New Schedule
Manual
Connect-on demand
Save Settings
Do Not Save Settings
Helpful Hints..
Internet Connection: When configuring the router to access the Internet, be sure to choose the correct Internet Connection Type from the drop down menu. If you are unsure of which option to choose, please contact your Internet Service Provider (ISP).
Support: If you are having trouble accessing the Internet through the router, double check any settings you have entered on this page and verify them with your ISP if needed.

Internet Setup
Static PPPoE

Click **Static PPPoE** radio button if your ISP uses a static PPPoE connection. Your ISP will provide you with a username and password. This option is typically used for DSL services. Make sure to remove your PPPoE software from your computer. The software is no longer needed and will not work through a router.

Dual LAN Enable: Tick the check box to enable IP Unnumbered on LAN (1-3) interface and NAT on Wireless Interface.

User Name: Enter your PPPoE user name.

Password: Enter your PPPoE password.

Confirm Password: Retype the new password.

Service Name: Enter the ISP Service Name (optional).

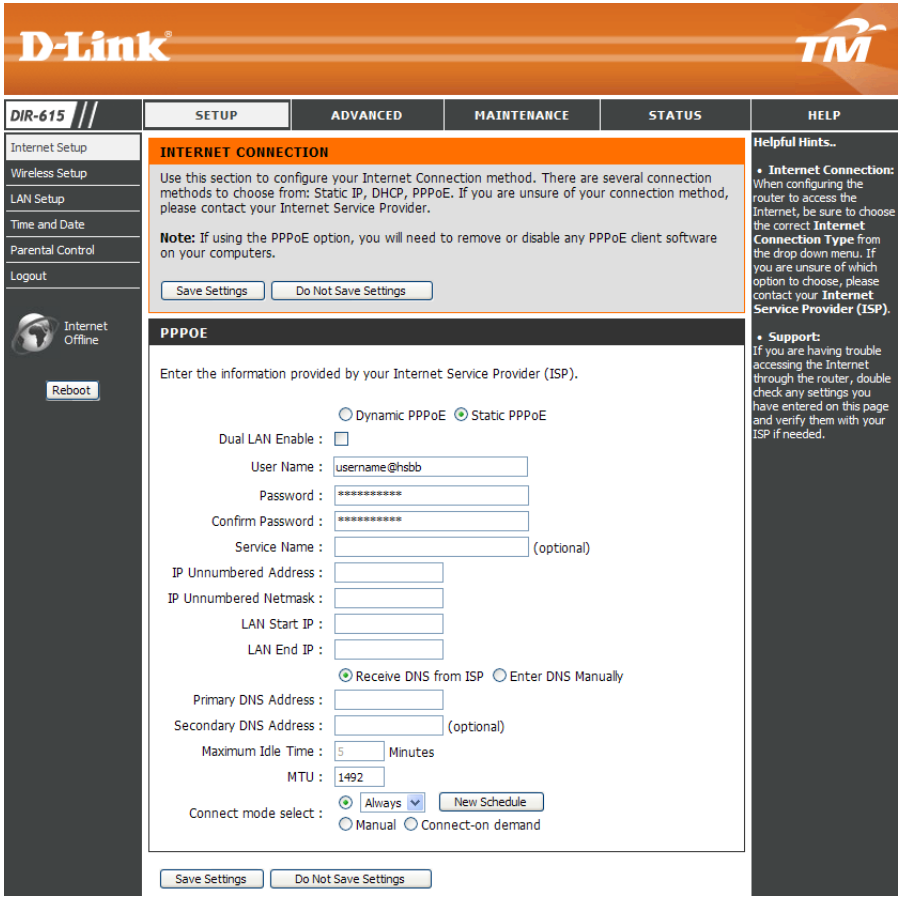
IP Unnumbered Address: Enter the IP address (Static PPPoE only).

IP Unnumbered Netmask: Enter the IP netmask (Static PPPoE only).

LAN IP: Enter Start and End LAN IP address.

DNS: Click **Recieve DNS from ISP** to get the DNS automatically. Click **Enter DNS Manually** to enter the DNS information below.

DNS Addresses: Enter the Primary and Secondary DNS Server Addresses.


D-Link
DIR-615
SETUP
ADVANCED
MAINTENANCE
STATUS
HELP
Internet Setup
Wireless Setup
LAN Setup
Time and Date
Parental Control
Logout
Internet Offline
Reboot
INTERNET CONNECTION
Use this section to configure your Internet Connection method. There are several connection methods to choose from: Static IP, DHCP, PPPoE. If you are unsure of your connection method, please contact your Internet Service Provider.
Note: If using the PPPoE option, you will need to remove or disable any PPPoE client software on your computers.
Save Settings
Do Not Save Settings
PPPOE
Enter the information provided by your Internet Service Provider (ISP).
Dynamic PPPoE
Static PPPoE
Dual LAN Enable :
User Name :
username@hsbb
Password :
Confirm Password :
Service Name :
(optional)
IP Unnumbered Address :
IP Unnumbered Netmask :
LAN Start IP :
LAN End IP :
Receive DNS from ISP
Enter DNS Manually
Primary DNS Address :
Secondary DNS Address :
(optional)
Maximum Idle Time :
5
Minutes
MTU :
1492
Connect mode select :
Always
New Schedule
Manual
Connect-on demand
Save Settings
Do Not Save Settings
Helpful Hints..
Internet Connection: When configuring the router to access the Internet, be sure to choose the correct Internet Connection Type from the drop down menu. If you are unsure of which option to choose, please contact your Internet Service Provider (ISP).
Support: If you are having trouble accessing the Internet through the router, double check any settings you have entered on this page and verify them with your ISP if needed.

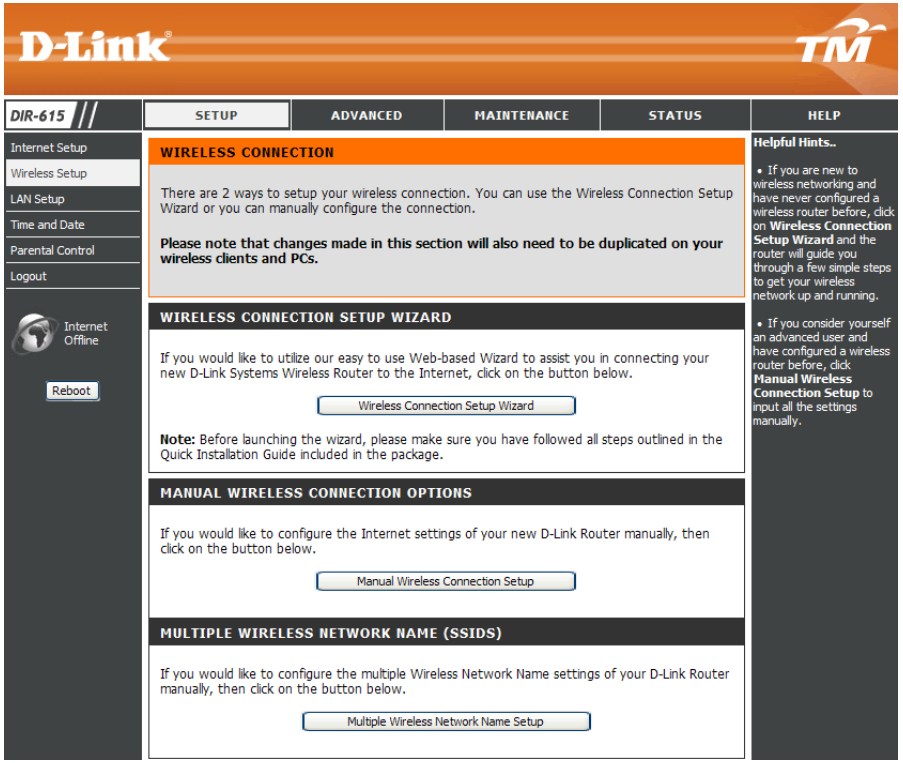
Maximum Idle Time: Enter a maximum idle time during which the Internet connection is maintained during inactivity. To disable this feature, enable Auto-reconnect.

MTU: Maximum Transmission Unit - You may need to change the MTU for optimal performance with your specific ISP. *1492* is the default MTU.

Connection Mode Select: Select either **Always**, **Manual**, or **Connect-on demand**.

Wireless Setup

Wireless settings for the router may be configured manually or by using a wizard. To use the wizard, click the **Wireless Connection Setup Wizard** button and then follow the steps that are described below. To configure the wireless settings manually, click the **Manual Wireless Connection Setup** button. The parameters for this window are described later in this section. The Wireless Security section that directly follows this Configuration section provides additional explanation for how to configure the WEP, WPA, WPA2, and WPA/WPA2 wireless security mode options. If you want to have more wireless network name, also known as SSID, click the **Multiple Wireless network Name Setup** button.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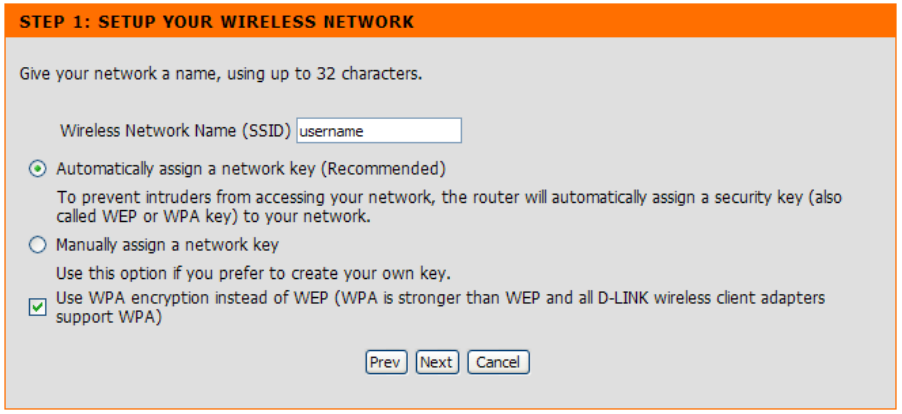
WIRELESS CONNECTION
There are 2 ways to setup your wireless connection. You can use the Wireless Connection Setup Wizard or you can manually configure the connection.
Please note that changes made in this section will also need to be duplicated on your wireless clients and PCs.
WIRELESS CONNECTION SETUP WIZARD
If you would like to utilize our easy to use Web-based Wizard to assist you in connecting your new D-Link Systems Wireless Router to the Internet, click on the button below.
Wireless Connection Setup Wizard
Note: Before launching the wizard, please make sure you have followed all steps outlined in the Quick Installation Guide included in the package.
MANUAL WIRELESS CONNECTION OPTIONS
If you would like to configure the Internet settings of your new D-Link Router manually, then click on the button below.
Manual Wireless Connection Setup
MULTIPLE WIRELESS NETWORK NAME (SSIDS)
If you would like to configure the multiple Wireless Network Name settings of your D-Link Router manually, then click on the button below.
Multiple Wireless Network Name Setup
Helpful Hints..
• If you are new to wireless networking and have never configured a wireless router before, click on Wireless Connection Setup Wizard and the router will guide you through a few simple steps to get your wireless network up and running.
• If you consider yourself an advanced user and have configured a wireless router before, click Manual Wireless Connection Setup to input all the settings manually.

Click **Wireless Connection Setup Wizard** to start wireless setup wizard. Click **Next** to continue.

WELCOME TO THE D-LINK WIRELESS SECURITY SETUP WIZARD
This wizard will guide you through a step-by-step process to setup your wireless network and make it secure.
Step 1: Setup your Wireless Network.
Step 2: Set your Wireless Security Password
Next
Cancel

Enter a Wireless Network Name, also known as SSID, in the text box. Click **Automatically assign a network key (Recommended)** or **Manually assing a network key** for the wireless security key, and use the check box to select the desired level of wireless security, WEP, WPA. and then click **Next** to continue.


STEP 1: SETUP YOUR WIRELESS NETWORK
Give your network a name, using up to 32 characters.
Wireless Network Name (SSID) username
Automatically assign a network key (Recommended)
To prevent intruders from accessing your network, the router will automatically assign a security key (also called WEP or WPA key) to your network.
Manually assign a network key
Use this option if you prefer to create your own key.
Use WPA encryption instead of WEP (WPA is stronger than WEP and all D-LINK wireless client adapters support WPA)
Prev
Next
Cancel

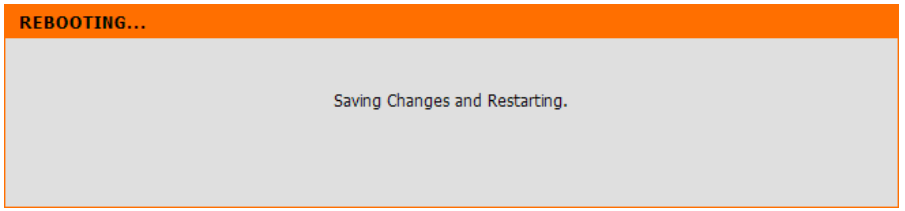
If selecting Manually assign a network key in the previous window, this window will open. Enter a wireless security password in the Network Key box. Click **Next** to continue.

STEP 2: SET YOUR WIRELESS SECURITY PASSWORD
You have selected your wireless security level - you will need to set a wireless security password.
The WPA (Wi-Fi Protected Access) key must meet one of following guidelines:
- Between 8 to 63 characters (A longer WPA key is more secure than a short one)
- Exactly 64 characters using 0-9 and A-F
Network Key :
Note: You will need to enter the same password that you created in this step into your wireless clients in order to enable proper wireless communication.
Prev
Next
Cancel

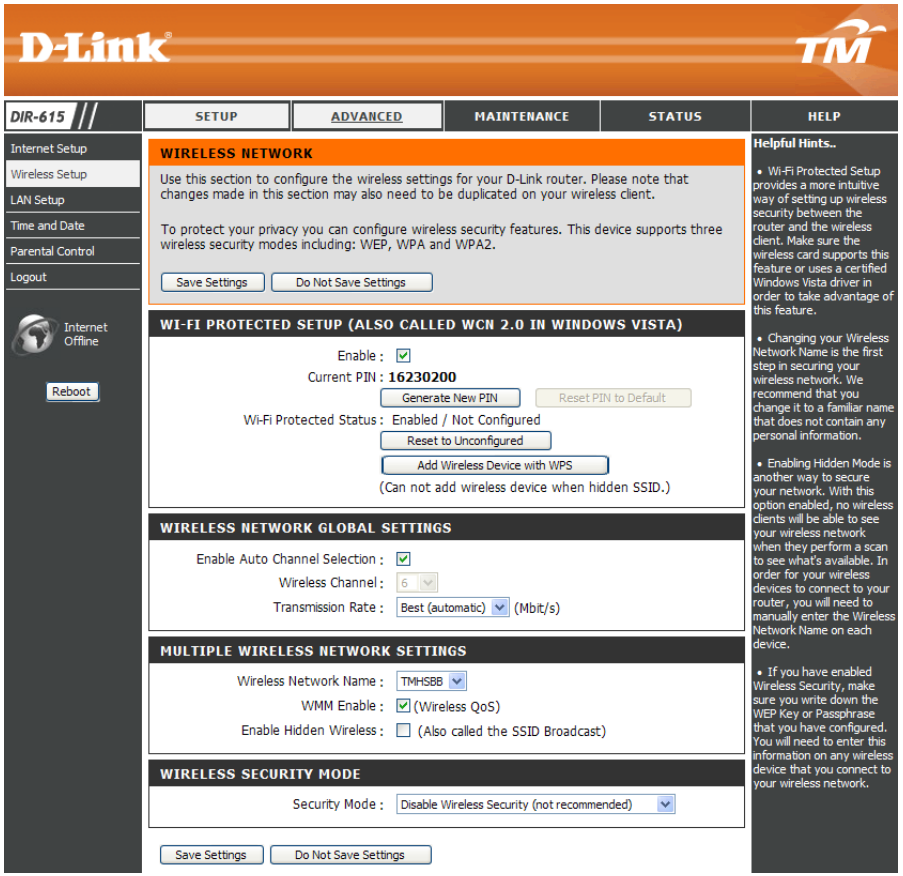
This window displays a summary of your wireless security settings. Please print this out or record this information in a safe place and then click **Save** to continue.

SETUP COMPLETE!
Below is a detailed summary of your wireless security settings. Please print this page out, or write down the information on a piece of paper, so you can configure the correct settings on your wireless client adapters.
Wireless Network Name (SSID) : username
Security Mode : Auto (WPA or WPA2) - Personal
Cipher Type : TKIP or AES
Network Key : nDvwwJhCgw
Note: In some smart wireless utilities (e.g. D-Link Wireless Utility or Wireless Zero Configuration), you only need to select a Wireless Network Name and enter a Network Key to access the Internet.
Prev
Save
Cancel

The Router will save the new settings and reboot. Please allow 1-2 minutes for rebooting. When the router has finished rebooting, the opening Wireless Setup window is displayed.



Click the **Manual Wireless Connection Setup** button to manually configure the wireless Internet setup. To enter this window, make sure at least one SSID is selected in Wireless Network Name Setup (**Setup** -> **Wireless Setup** -> **Multiple Wireless Network name Setup**).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WIRELESS NETWORK
Use this section to configure the wireless settings for your D-Link router. Please note that changes made in this section may also need to be duplicated on your wireless client.
To protect your privacy you can configure wireless security features. This device supports three wireless security modes including: WEP, WPA and WPA2.
Save Settings
Do Not Save Settings
WI-FI PROTECTED SETUP (ALSO CALLED WCN 2.0 IN WINDOWS VISTA)
Enable :
Current PIN : 16230200
Generate New PIN
Reset PIN to Default
Wi-Fi Protected Status : Enabled / Not Configured
Reset to Unconfigured
Add Wireless Device with WPS
(Can not add wireless device when hidden SSID.)
WIRELESS NETWORK GLOBAL SETTINGS
Enable Auto Channel Selection :
Wireless Channel : 6
Transmission Rate : Best (automatic) (Mbit/s)
MULTIPLE WIRELESS NETWORK SETTINGS
Wireless Network Name : TMHSBB
WMM Enable : (Wireless QoS)
Enable Hidden Wireless : (Also called the SSID Broadcast)
WIRELESS SECURITY MODE
Security Mode : Disable Wireless Security (not recommended)
Save Settings
Do Not Save Settings
Helpful Hints..
• Wi-Fi Protected Setup provides a more intuitive way of setting up wireless security between the router and the wireless client. Make sure the wireless card supports this feature or uses a certified Windows Vista driver in order to take advantage of this feature.
• Changing your Wireless Network Name is the first step in securing your wireless network. We recommend that you change it to a familiar name that does not contain any personal information.
• Enabling Hidden Mode is another way to secure your network. With this option enabled, no wireless clients will be able to see your wireless network when they perform a scan to see what's available. In order for your wireless devices to connect to your router, you will need to manually enter the Wireless Network Name on each device.
• If you have enabled Wireless Security, make sure you write down the WEP Key or Passphrase that you have configured. You will need to enter this information on any wireless device that you connect to your wireless network.

Wi-Fi Protected Setup: To implement Wi-Fi protection, or WCN 2.0, tick the Enable checkbox, click either **Generate New PIN** or **Reset PIN to Default**, and then configure the Wi-Fi settings below. Please see the Setting Up Wi-Fi Protection (WCN 2.0 in Windows Vista) section later in this manual for detailed configuration information.

Enable: Check the box to enable the wireless function. If you do not want to use wireless, uncheck the box to disable all the wireless functions.

Enable Wireless Channel Selection: Indicates the channel setting for the DIR-615. By default the channel is set to *6*. The Channel can be changed to fit the channel setting for an existing wireless network or to customize the wireless network. The **Enable Auto Channel Selection** setting can be selected to allow the DIR-615 to choose the channel with the least amount of interference.

Transmission Rate: Use the drop-down menu to select the appropriate Transmission Rate in Mbits per second. Many users will want to use the default setting, *Best (automatic)*.

Wireless Network Name: Service Set Identifier (SSID) is the name of your wireless network. Once created and enabled a name in Multiple Wireless Network Name (SSIDs) window, you may select fromthe drop-down menu.

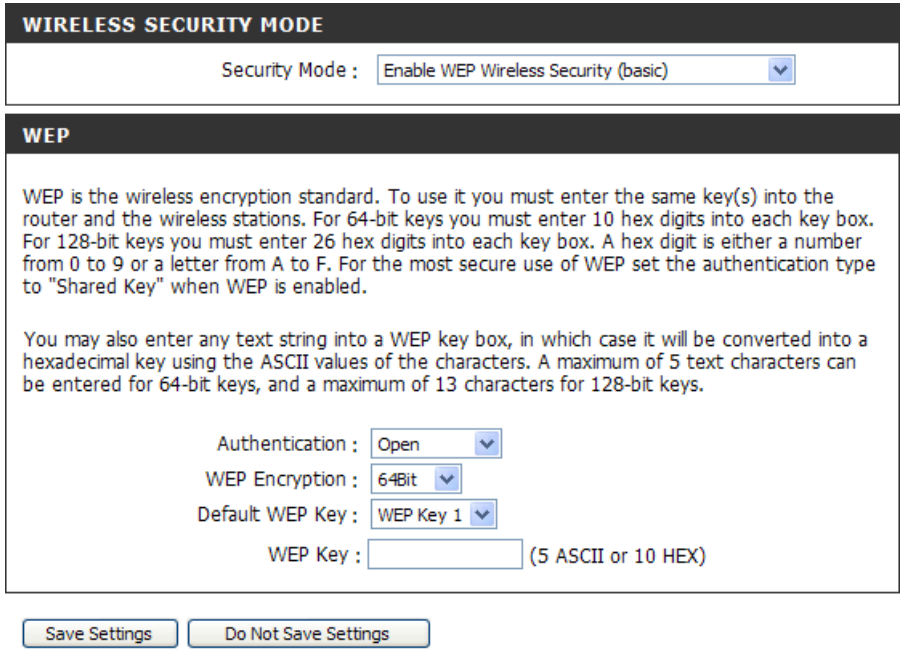
WMM Enable: Enable Wi-Fi Multimedia to enjoy basic quality of service features. WMM prioritizes traffic according to four access categories: voice, video, best effort, and background.

Enable Hidden Wireless: Check this option if you would not like the SSID of your wireless network to be broadcasted by the DIR-615. If this option is checked, the SSID of the DIR-615 will not be seen by Site Survey utilities so your wireless clients will have to know the SSID of your DIR-615 in order to connect to it.

1. To enable WEP, next to **Security Mode**, select Enable *WEP Wireless Security (basic)*.

2. Select the Authentication method, WEP Encryption, it's default and the key value.

3. Click **Save Settings** to save your settings.


WIRELESS SECURITY MODE
Security Mode : Enable WEP Wireless Security (basic)
WEP
WEP is the wireless encryption standard. To use it you must enter the same key(s) into the router and the wireless stations. For 64-bit keys you must enter 10 hex digits into each key box. For 128-bit keys you must enter 26 hex digits into each key box. A hex digit is either a number from 0 to 9 or a letter from A to F. For the most secure use of WEP set the authentication type to "Shared Key" when WEP is enabled.
You may also enter any text string into a WEP key box, in which case it will be converted into a hexadecimal key using the ASCII values of the characters. A maximum of 5 text characters can be entered for 64-bit keys, and a maximum of 13 characters for 128-bit keys.
Authentication : Open
WEP Encryption : 64Bit
Default WEP Key : WEP Key 1
WEP Key : (5 ASCII or 10 HEX)
Save Settings
Do Not Save Settings

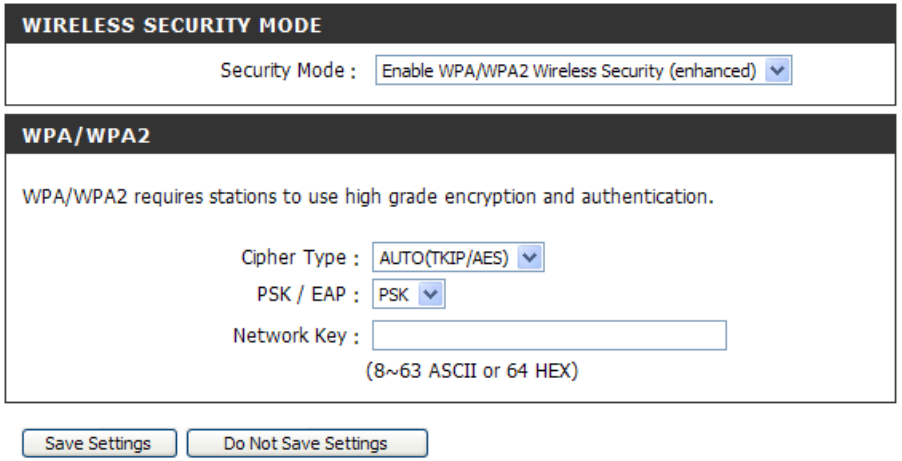
1. To enable *Enable WPA/WPA2 Wireless Security (enhanced)*.

2. Next to **Cipher Type**, select *TKIP*, *AES*, or *AUTO(TKIP/AES)*.

3. Next to **PSK / EAP**, select *PSK*.

4. Next to **Network Key**, enter a passphrase. The key is an alpha-numeric password between 8 and 63 characters long. The password can include symbols (!?*&_) and spaces. Make sure you enter this key exactly the same on all other wireless clients.

5. Click **Save Settings** to save your settings. If you are configuring the router with a wireless adapter, you will lose connectivity until you enable WPA, WPA2, or WPA/WPA2 (whichever of the three options you have selected above) on your adapter and enter the same network key as you did on the router.



1. To enable *Enable WPA/WPA2 Wireless Security (enhanced)*.

2. Next to **Cipher Type**, select *TKIP*, *AES*, or *AUTO(TKIP/AES)*.

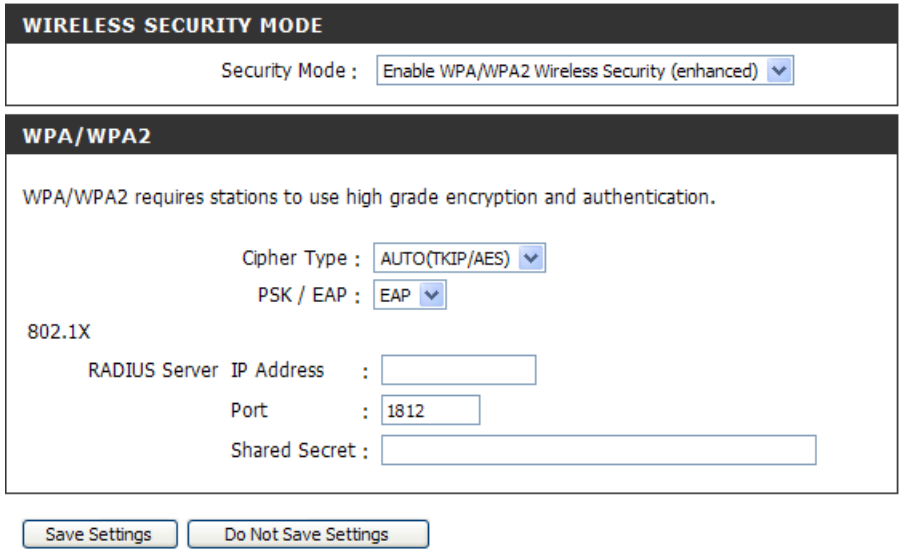
3. Next to **PSK / EAP**, select *EAP*.

4. Next to **RADIUS Server IP Address** enter the IP address of your RADIUS server.

5. Next to **Port**, enter the port you are using with your RADIUS server. *1812* is the default port.

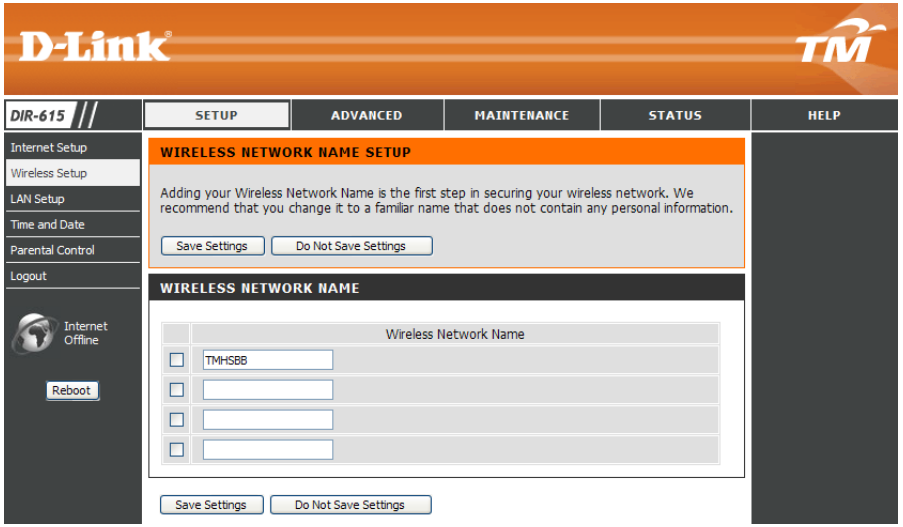
6. Next to **Shared Secret**, enter the security key.

7. Click **Save Settings** to save your settings.


WIRELESS SECURITY MODE
Security Mode : Enable WPA/WPA2 Wireless Security (enhanced)
WPA/WPA2
WPA/WPA2 requires stations to use high grade encryption and authentication.
Cipher Type : AUTO(TKIP/AES)
PSK / EAP : EAP
802.1X
RADIUS Server IP Address :
Port : 1812
Shared Secret :
Save Settings
Do Not Save Settings

Click the **Multiple Wireless Network Name Setup** to add or select SSIDs.

Wireless network Name: Enter wireless network work names (SSIDs) in the field. Tick the check box to select the SSID.



LAN Setup

This section will allow you to change the local network settings of the router and to configure the DHCP settings.

Router IP Address: Enter the IP address of the router. The default IP address is 192.168.0.1.

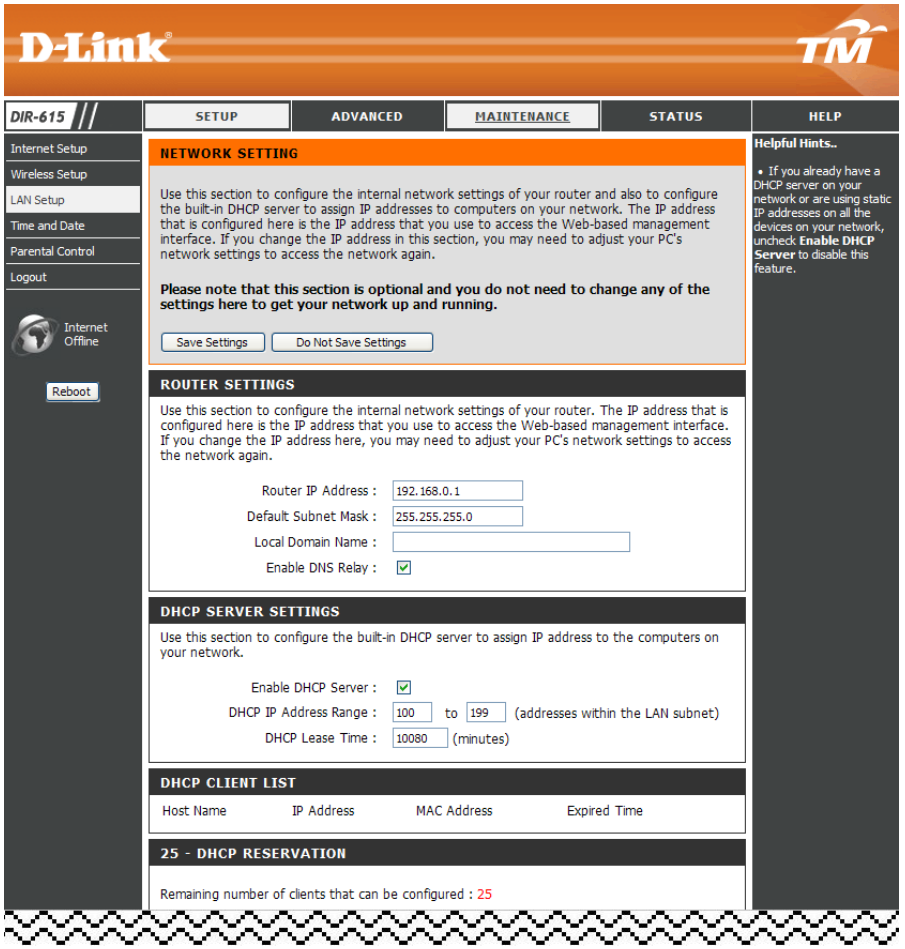
If you change the IP address, once you click **Apply**, you will need to enter the new IP address in your browser to get back into the configuration utility.

Default Subnet Mask: Enter the Subnet Mask. The default subnet mask is 255.255.255.0.

Local Domain Name: Enter the Domain name (Optional).

Enable DNS Relay: Check the box to transfer the DNS server information from your ISP to your computers. If unchecked, your computers will use the router for a DNS server.

Refer to the next page for DHCP information.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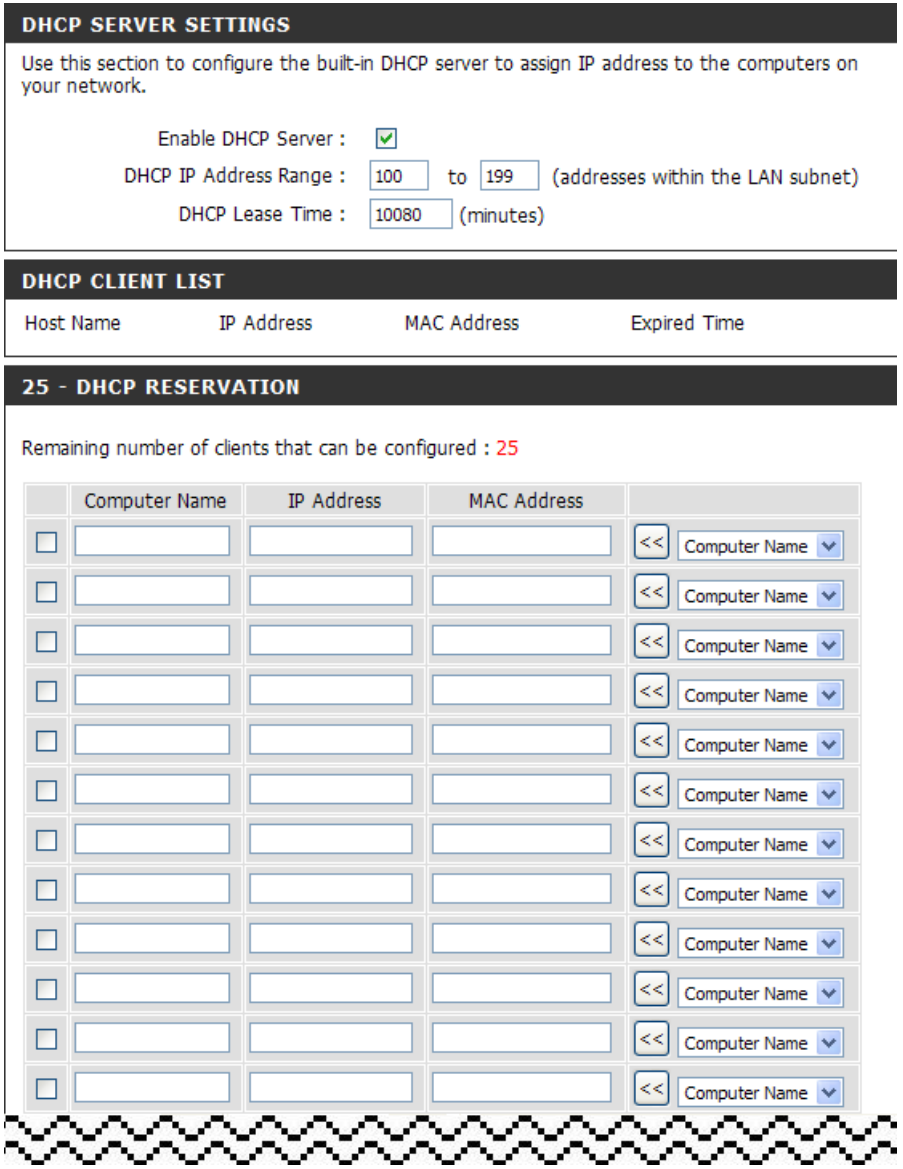
NETWORK SETTING
Use this section to configure the internal network settings of your router and also to configure the built-in DHCP server to assign IP addresses to computers on your network. The IP address that is configured here is the IP address that you use to access the Web-based management interface. If you change the IP address in this section, you may need to adjust your PC's network settings to access the network again.
Please note that this section is optional and you do not need to change any of the settings here to get your network up and running.
Save Settings
Do Not Save Settings
ROUTER SETTINGS
Use this section to configure the internal network settings of your router. The IP address that is configured here is the IP address that you use to access the Web-based management interface. If you change the IP address here, you may need to adjust your PC's network settings to access the network again.
Router IP Address : 192.168.0.1
Default Subnet Mask : 255.255.255.0
Local Domain Name :
Enable DNS Relay :
DHCP SERVER SETTINGS
Use this section to configure the built-in DHCP server to assign IP address to the computers on your network.
Enable DHCP Server :
DHCP IP Address Range : 100 to 199 (addresses within the LAN subnet)
DHCP Lease Time : 10080 (minutes)
DHCP CLIENT LIST
Host Name
IP Address
MAC Address
Expired Time
25 - DHCP RESERVATION
Remaining number of clients that can be configured : 25
Helpful Hints..
• If you already have a DHCP server on your network or are using static IP addresses on all the devices on your network, uncheck Enable DHCP Server to disable this feature.

DHCP Server Settings

DHCP stands for Dynamic Host Control Protocol. The DIR-615 has a built-in DHCP server. The DHCP Server will automatically assign an IP address to the computers on the LAN/private network. Be sure to set your computers to be DHCP clients by setting their TCP/IP settings to “Obtain an IP Address Automatically.” When you turn your computers on, they will automatically load the proper TCP/IP settings provided by the DIR-615. The DHCP Server will automatically allocate an unused IP address from the IP address pool to the requesting computer. You must specify the starting and ending address of the IP address pool.


DHCP SERVER SETTINGS
Use this section to configure the built-in DHCP server to assign IP address to the computers on your network.
Enable DHCP Server :
DHCP IP Address Range : 100 to 199 (addresses within the LAN subnet)
DHCP Lease Time : 10080 (minutes)
DHCP CLIENT LIST
Host Name
IP Address
MAC Address
Expired Time
25 - DHCP RESERVATION
Remaining number of clients that can be configured : 25
Computer Name
IP Address
MAC Address
<<
Computer Name

Enable DHCP Server: Check the box to enable the DHCP server on your router. Uncheck to disable this function.

DHCP IP Address Range: Enter the starting and ending IP addresses for the DHCP server’s IP assignment.

DHCP Lease Time: The length of time for the IP address lease. Enter the Lease time in minutes.

DHCP Reservation Enter the name, IP address and MAC address of the device to ensure the device is always assigned to the same IP address on the network. Tick the check box to enable DHCP reservation for the device.

Time and Date

This section will allow you to configure, update, and maintain the correct time on the internal system clock.

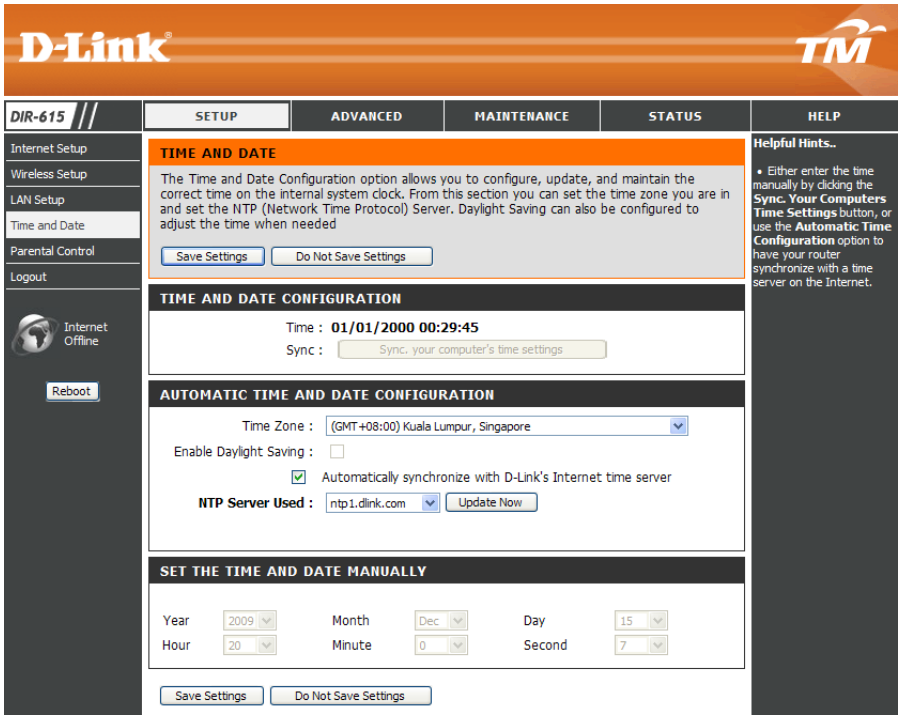
Sync: Deselect the **Automatically synchronize with D-Link's Internet time server** check box to be able to see the option. Click the **Sync. your computer's time settings** button to make the Router's time same as your computer.

Time Zone: Select the Time Zone from the drop-down menu.

Enable Daylight Saving: Ticking this checkbox enables Daylight Saving time.

NTP Server Used: Tick the **Automatically synchronize with D-Link's Internet time server** check box and then use the drop-down menu to select an NTP server. NTP is short for Network Time Protocol. NTP synchronizes computer clock times in a network of computers.

Manual: To manually input the time, deselect **Automatically synchronize with D-Link's Internet time server** check box and then enter the values in these fields for the Year, Month, Day, Hour, Minute, and Second. Click **Save Settings**.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TIME AND DATE
The Time and Date Configuration option allows you to configure, update, and maintain the correct time on the internal system clock. From this section you can set the time zone you are in and set the NTP (Network Time Protocol) Server. Daylight Saving can also be configured to adjust the time when needed
Save Settings
Do Not Save Settings
TIME AND DATE CONFIGURATION
Time : 01/01/2000 00:29:45
Sync : Sync. your computer's time settings
AUTOMATIC TIME AND DATE CONFIGURATION
Time Zone : (GMT+08:00) Kuala Lumpur, Singapore
Enable Daylight Saving :
Automatically synchronize with D-Link's Internet time server
NTP Server Used : ntp1.dlink.com
Update Now
SET THE TIME AND DATE MANUALLY
Year 2009 Month Dec Day 15
Hour 20 Minute 0 Second 7
Save Settings
Do Not Save Settings
Helpful Hints..
• Either enter the time manually by clicking the Sync. Your Computers Time Settings button, or use the Automatic Time Configuration option to have your router synchronize with a time server on the Internet.

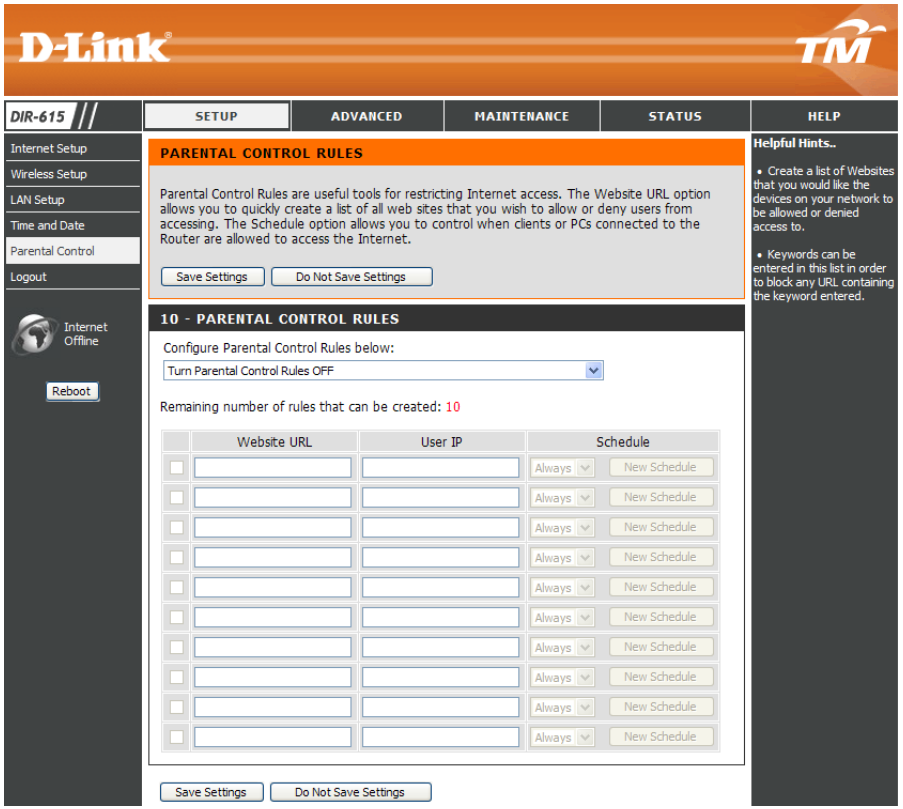
Parental Control

This feature allows you to create a list of websites that you want to either allow or deny users access.

Configure Parental Control: Select *Turn Parental Control Rules OFF*, or *Turn Parental Control Rules ON and DENY computers access to ONLY these sites*.

Website URL: Enter the keywords or URLs that you want to block. Any URL with the keyword in it will be blocked.

Schedule: The schedule of time when the parental control filter will be enabled. The schedule may be set to Always, which will allow the particular service to always be enabled. You can create your own times in the **Maintenance** > **Schedules** section.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PARENTAL CONTROL RULES
Parental Control Rules are useful tools for restricting Internet access. The Website URL option allows you to quickly create a list of all web sites that you wish to allow or deny users from accessing. The Schedule option allows you to control when clients or PCs connected to the Router are allowed to access the Internet.
Save Settings
Do Not Save Settings
10 - PARENTAL CONTROL RULES
Configure Parental Control Rules below:
Turn Parental Control Rules OFF
Remaining number of rules that can be created: 10
Website URL
User IP
Schedule
Always
New Schedule
Save Settings
Do Not Save Settings
Helpful Hints..
• Create a list of Websites that you would like the devices on your network to be allowed or denied access to.
• Keywords can be entered in this list in order to block any URL containing the keyword entered.

Port Forwarding

This will allow you to open a single port or a range of ports.

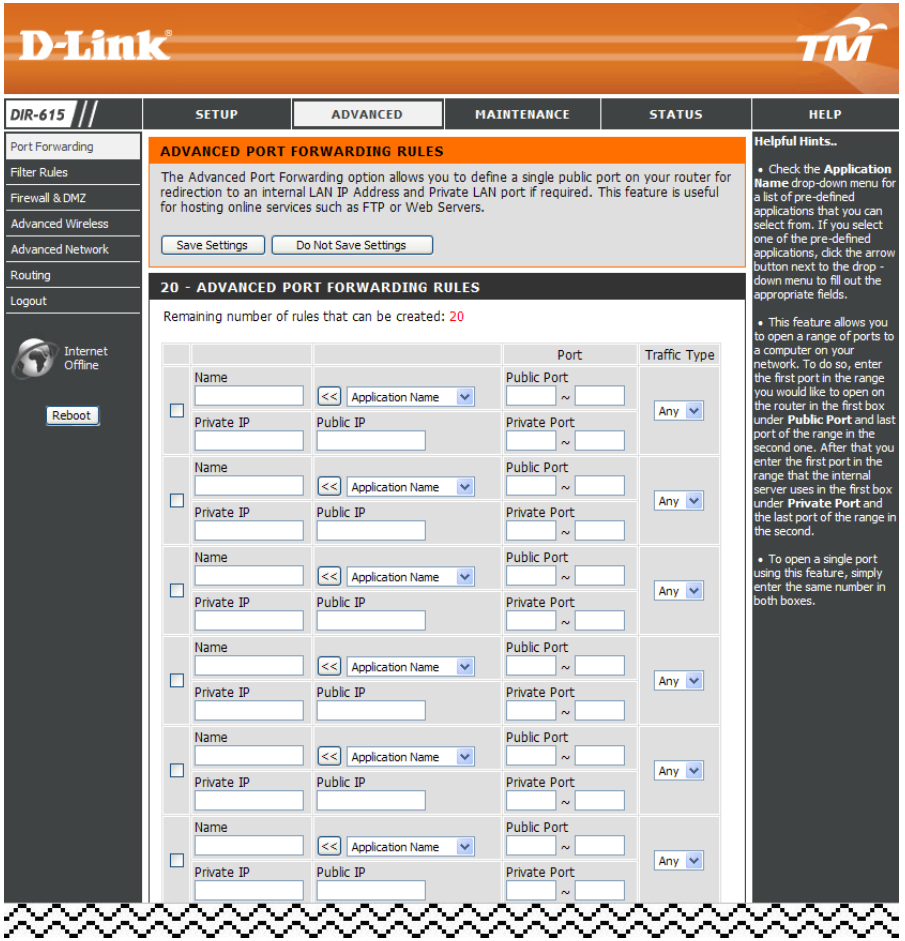
Rule: Check the box to enabled the rule.

Name: Enter a name for the rule.

IP Address: Enter the IP address of the computer on your local network that you want to allow the incoming service to.

Start Port/ End Port: Enter the port or ports that you want to open. If you want to open one port, enter the same port in both boxes.

Traffic Type: Select *TCP*, *UDP*, or *Any*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ADVANCED PORT FORWARDING RULES
The Advanced Port Forwarding option allows you to define a single public port on your router for redirection to an internal LAN IP Address and Private LAN port if required. This feature is useful for hosting online services such as FTP or Web Servers.
Save Settings
Do Not Save Settings
20 - ADVANCED PORT FORWARDING RULES
Remaining number of rules that can be created: 20
Port
Traffic Type
Name
Application Name
Public Port
Private IP
Public IP
Private Port
Any
Helpful Hints..
• Check the Application Name drop-down menu for a list of pre-defined applications that you can select from. If you select one of the pre-defined applications, click the arrow button next to the drop - down menu to fill out the appropriate fields.
• This feature allows you to open a range of ports to a computer on your network. To do so, enter the first port in the range you would like to open on the router in the first box under Public Port and last port of the range in the second one. After that you enter the first port in the range that the internal server uses in the first box under Private Port and the last port of the range in the second.
• To open a single port using this feature, simply enter the same number in both boxes.

Filter Rules

The Filter Rules allows you to configure IP or MAC address of a network adapter and allow or deny its network access at certain time.

MAC/IP Address: Enter the MAC or IP address of a network adapter for a filter rule.

Destination Port: Enter a port or range of ports of TCP or UDP for the filter rule.

Traffic Type: Select a traffic type (*TCP*, *UDP*, or *Any*) that will be used for the filter rule.

Action: Use the drop-down menu to select **Allow** or **Deny** the network access.

Schedule: Select **Always** to apply for this filter rule all the time, or select one of the scheduled time. The scheduled time should be configured in **Maintenance** > **Schedules** section in advance.

Firewall & DMZ

This section will allow you to set up inside and outside firewall. The outside firewall can choose various which part you want to prevernt from.

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FIREWALL & DMZ SETTINGS
Firewall rules can be used to allow or deny traffic attempting to pass through the router.
DMZ means "Demilitarized Zone". DMZ allows computers behind the router firewall to be accessible to Internet traffic. Typically, your DMZ would contain Web servers, FTP servers and others.
Save Settings
Do Not Save Settings
INSIDE FIREWALL SETTING
Enable LAN to WAN Firewall :
OUTSIDE FIREWALL SETTING
WAN Connection : WAN Connection 1
Enable WAN to LAN Firewall :
Firewall Setting Part Name
Firewall Part Setting Iterms
DMZ
DMZ Enable :
IP :
Always
New Schedule
DOS ATTACK
Enable DoS ATTACK Prevention :
SYN Flooding :
ICMP Flooding :
POST SCAN ATTACK
Enable POST SCAN ATTACK Prevention :
Enable NAMP Xmas Prevention :
Enable Xmas Prevention :
Enable NULL Scan Prevention :
Enable SYN ACK Prevention :
Enable SYN RST Prevention :
Enable SYN FIN Prevention :
Helpful Hints..
• DMZ:
Only enable the DMZ option as a last resort. If you are having trouble using an application from a computer behind the router, first try opening ports associated with the application in the Advanced Port Forwarding section.

Enable LAN to WAN Firewall: Tick to enable the firewall from LAN to WAN.

WAN Connection: Select the WAN Connection you want to set up the firewall.

Enable WAN to LAN Firewall: Tick to enable the firewall from WAN to LAN.

DMZ: Tick **DMZ Enable** check box to enable DMZ, and enter an IP adrees of a computer in the **IP** field to be accessible to Internet traffic.

DoS Attack: DoS (Denial-of-service) attack makes the computer resources unavailabel for intened users. Tick the **Enable DoS Attack Prevention** check box to enable the function, and tick the rest of the check boxes to prevent from various type of DoS attack.

Post Scan Attack: Post scan attack targets the opening ports and attacks those ports. Tick the **Enable Post Scan Attack Prevention** check box to enable the function, and tick the rest of the check boxes to prevent from various type of post scan attack.

Service Filter: Service FilterTick the **Enable Service Filter Blocking** check box to enable the function, and tick the rest of the check boxes to deny the access from various tools.

Advanced Wireless

This window allows you to change the behavior of the 802.11g wireless radio from the standard settings. Please be aware that any changes to the factory default settings may adversely affect the behavior of your network.

Transmit Power: Set the transmit power of the antennas.

Beacon interval: Beacons are packets sent by an Access Point to synchronize a wireless network. Specify a value. *100* is the default setting and is recommended.

RTS Threshold: This value should remain at its default setting of *2346*. If inconsistent data flow is a problem, only a minor modification should be made.

Fragmentation: The fragmentation threshold, which is specified in bytes, determines whether packets will be fragmented. Packets exceeding the 2346 byte setting will be fragmented before transmission. *2346* is the default setting.

DTIM Interval: (Delivery Traffic Indication Message) *1* is the default setting. A DTIM is a countdown informing clients of the next window for listening to broadcast and multicast messages.

Preamble Type: Select Short or Long Preamble. The Preamble defines the length of the CRC block (Cyclic Redundancy Check is a common technique for detecting data transmission errors) for communication between the wireless router and the roaming wireless network adapters. Note: High network traffic areas should use the shorter preamble type.

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ADVANCED WIRELESS SETTINGS
These options are for users that wish to change the behavior of their 802.11n wireless radio from the standard settings. We do not recommend changing these settings from the factory defaults. Incorrect settings may impact the performance of your wireless radio. The default settings should provide the best wireless radio performance in most environments.
Save Settings
Do Not Save Settings
ADVANCED WIRELESS SETTINGS
Transmit Power : 100%
Beacon interval : 100 (msec, range:20~1000, default:100)
RTS Threshold : 2346 (range: 256~2346, default:2346)
Fragmentation : 2346 (range: 1500~2346, default:2346, even number only)
DTIM interval : 1 (range: 1~255, default:1)
Preamble Type : Short Preamble Long Preamble
CTS Mode : None Always Auto
Wireless Mode : 802.11 Mixed(n/g/b)
Bandwidth : 20/40 MHz(Auto)
Short Guard Interval :
WIRELESS MAC FILTER
SSID : TMHSBB
Configure Wireless MAC Filter Rules below:
Turn Wireless MAC Filter OFF
The input format of MAC address must be xx:xx:xx:xx:xx:xx
MAC Address
Helpful Hints..
• It is recommended that you leave these parameters with their default values. Adjusting them could limit the performance of your wireless network.
• Use 802.11n only for countries where it is required.

CTS Mode: CTS (Clear To Send) is a function used to minimize collisions among wireless devices on a wireless local area network (LAN). CTS will make sure the wireless network is clear before a wireless client attempts to send wireless data. Enabling CTS will add overhead and may lower wireless through put. **Always:** CTS will always be used to make sure the wireless LAN is clear before sending data. **Auto:** CTS will monitor the wireless network and automatically decide whether to implement CTS based on the amount of traffic and collisions that occurs on the wireless network.

Wireless Mode: Select one of the following:
802.11n Only - Select only if all of your wireless clients are 802.11n.
802.11 Mixed(g/b) - Select if you are using both 802.11b and 802.11g wireless clients.
802.11 Mixed(n/g/b) - Select if you are using a mix of 802.11n, 11g, and 11b wireless clients.

Bandwidth: Select the Channel Width:
20MHz - Select if you are not using any 802.11n wireless clients. This is the default setting.
20/40MHz(Auto) - Select if you are using both 802.11n and non-802.11n wireless devices.

Short Guard Interval: Check this box to reduce the guard interval time therefore increasing the data capacity. However, it's less reliable and may create higher data loss.

Wireless Mac Filter: This section allows you to configure the MAC address of a computer, and allow or deny its access to wireless.

SSID: Use the drop-down list to select an SSID that has been configured in Wireless Network Name Setup.

Wireless MAC Filter Rule: Use the **Configure Wireless MAC Filter Rules below** drop-down list to select an universal MAC filter rule for the MAC addresses listed in the fields below.

MAC Address: Enter the MAC address for the rule. The format should be xx:xx:xx:xx:xx:xx.

Advanced Network

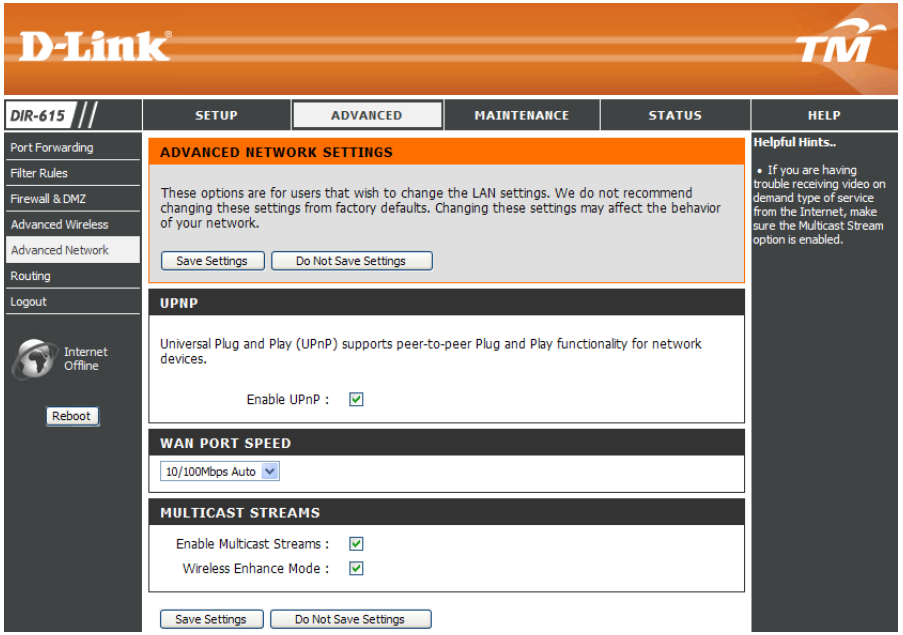
This window allows you to change the LAN settings. Please be aware that any changes to the factory default settings may affect the behavior of your network.

Enable UPnP: To use the Universal Plug and Play (UPnP™) feature tick this checkbox. UPNP provides compatibility with networking equipment, software and peripherals.

WAN Port Speed: You may set the port speed of the WAN port to *10Mbps*, *100Mbps*, or *10/100Mbps Auto*. Some older cable or DSL modems may require you to set the port speed to 10Mbps.

Enable Multicast Streams: Tick the check box to allow multicast traffic to pass through the router from the Internet.

Wireless Enhance Mode: Tick the check box to allow wireless multicast traffic to pass through the router.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ADVANCED NETWORK SETTINGS
These options are for users that wish to change the LAN settings. We do not recommend changing these settings from factory defaults. Changing these settings may affect the behavior of your network.
Save Settings
Do Not Save Settings
UPNP
Universal Plug and Play (UPnP) supports peer-to-peer Plug and Play functionality for network devices.
Enable UPnP :
WAN PORT SPEED
10/100Mbps Auto
MULTICAST STREAMS
Enable Multicast Streams :
Wireless Enhance Mode :
Save Settings
Do Not Save Settings
Helpful Hints..
• If you are having trouble receiving video on demand type of service from the Internet, make sure the Multicast Stream option is enabled.

Routing

This option allows you to define fixed routes to defined destinations.

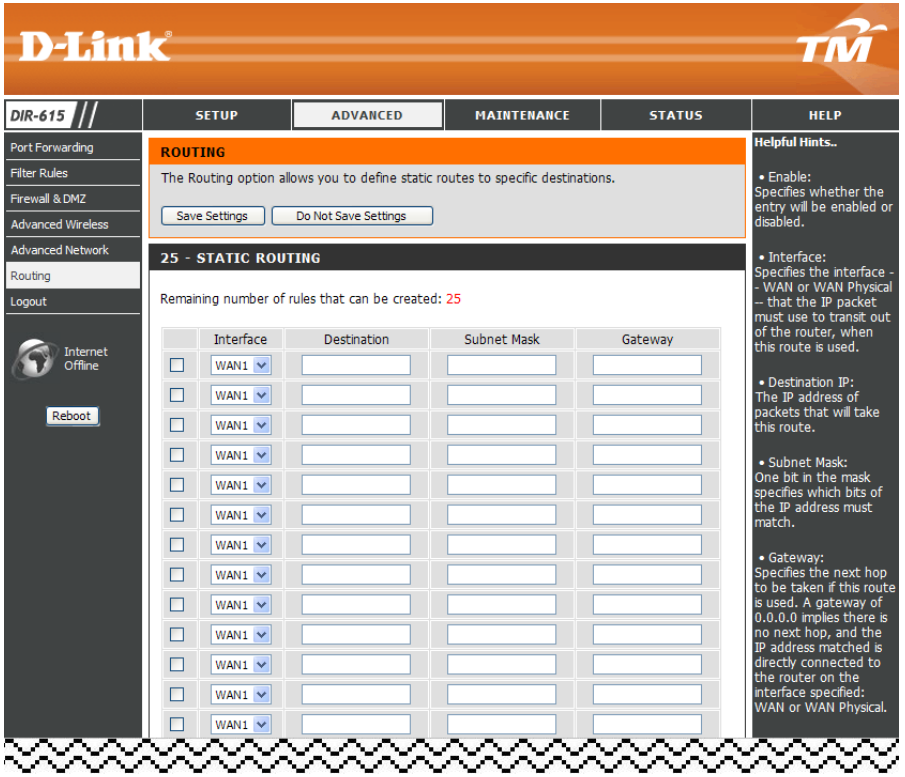
Enable: Tick this checkbox to enable or disable fixed routes to defined destinations.

Interface: Use the drop-down menu to choose the *WAN or WAN (Physical Port)* Interface the IP packet must use to transit out of the Router.

Destination: The IP address of the packets that will take this route.

Subnet Mask: The subnet of the IP address of the packets that will take this route.

Gateway: Specifies the next hop to be taken if this route is used.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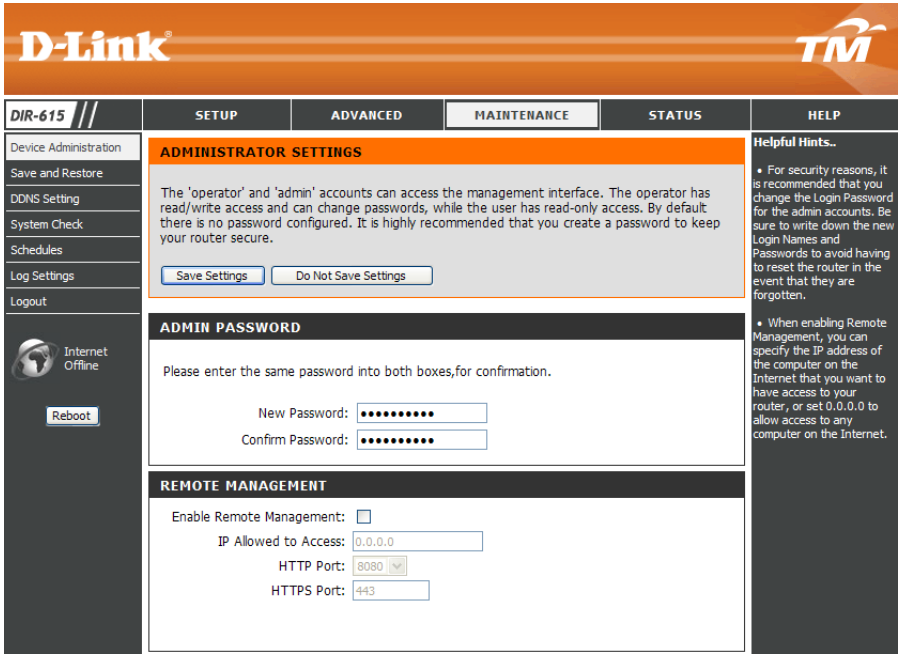
ROUTING
The Routing option allows you to define static routes to specific destinations.
Save Settings
Do Not Save Settings
25 - STATIC ROUTING
Remaining number of rules that can be created: 25
Interface
Destination
Subnet Mask
Gateway
WAN1
Helpful Hints..
• Enable: Specifies whether the entry will be enabled or disabled.
• Interface: Specifies the interface -- WAN or WAN Physical -- that the IP packet must use to transit out of the router, when this route is used.
• Destination IP: The IP address of packets that will take this route.
• Subnet Mask: One bit in the mask specifies which bits of the IP address must match.
• Gateway: Specifies the next hop to be taken if this route is used. A gateway of 0.0.0.0 implies there is no next hop, and the IP address matched is directly connected to the router on the interface specified: WAN or WAN Physical.

Device Administration

This window will allow you to change the Administrator password. You can also enable Remote Management.

Administrator Password: Enter a New Password for the administrator login name and then retype the new password in the Confirm Password textbox. The administrator can make changes to the settings.

Enable Remote Management: Remote management allows the DIR-615 to be configured from the Internet by a web browser. A username and password is still required to access the Web-Management interface. In general, only a member of your network can browse the built-in web pages to perform Administrator tasks. This feature enables you to perform Administrator tasks from the remote (Internet) host.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ADMINISTRATOR SETTINGS
The 'operator' and 'admin' accounts can access the management interface. The operator has read/write access and can change passwords, while the user has read-only access. By default there is no password configured. It is highly recommended that you create a password to keep your router secure.
Save Settings
Do Not Save Settings
ADMIN PASSWORD
Please enter the same password into both boxes,for confirmation.
New Password:
Confirm Password:
REMOTE MANAGEMENT
Enable Remote Management:
IP Allowed to Access:
0.0.0.0
HTTP Port:
8080
HTTPS Port:
443
Helpful Hints..
• For security reasons, it is recommended that you change the Login Password for the admin accounts. Be sure to write down the new Login Names and Passwords to avoid having to reset the router in the event that they are forgotten.
• When enabling Remote Management, you can specify the IP address of the computer on the Internet that you want to have access to your router, or set 0.0.0.0 to allow access to any computer on the Internet.

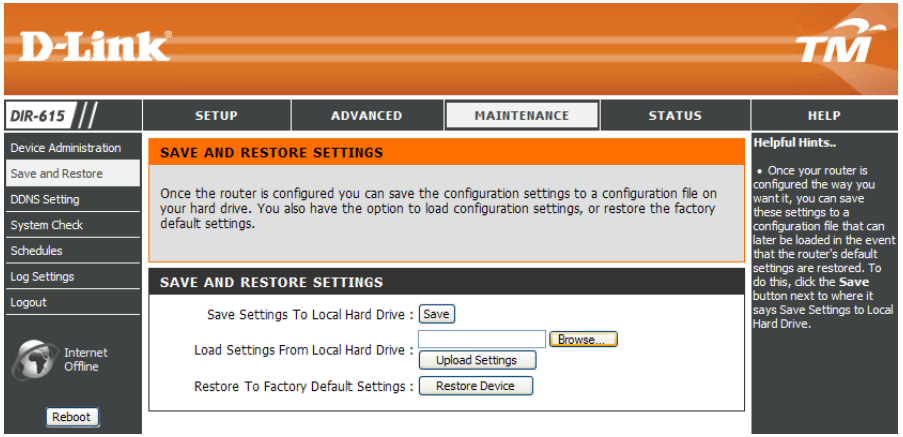
IP Allowed to Access: The Internet IP address of the computer that has access to the Broadband Router. If you leave this field blank or type *0.0.0.0*, then any computer will be able to access the Router. This would present a security risk and is not recommended.

HTTP Port: The port number used to access the DIR-615. For example: http://x.x.x.x:8080 whereas x.x.x.x is the WAN IP address of the DIR-615 and *8080* is the port used for the Web-Management interface.

HTTPS Port: The port number used to access the DIR-615. For example: https://x.x.x.x:443 whereas x.x.x.x is the WAN IP address of the DIR-615 and *443* is the port used for the Web-Management interface.

Save and Restore

This window allows you to save your configuration file to a hard drive, load configuration settings from a hard drive, and restore the Router's factory default settings.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SAVE AND RESTORE SETTINGS
Once the router is configured you can save the configuration settings to a configuration file on your hard drive. You also have the option to load configuration settings, or restore the factory default settings.
SAVE AND RESTORE SETTINGS
Save Settings To Local Hard Drive :
Save
Load Settings From Local Hard Drive :
Browse...
Upload Settings
Restore To Factory Default Settings :
Restore Device
Helpful Hints..
• Once your router is configured the way you want it, you can save these settings to a configuration file that can later be loaded in the event that the router's default settings are restored. To do this, click the Save button next to where it says Save Settings to Local Hard Drive.

Save Settings to Local Hard Drive: Use this option to save the current router configuration settings to a file on the hard disk of the computer you are using. First, click the **Save** button. You will then see a file dialog, where you can select a location and file name for the settings.

Load Settings from Local Hard Drive: Use this option to load previously saved router configuration settings. First, use the **Browse** control to find a previously save file of configuration settings. Then, click the **Upload Settings** button to transfer those settings to the Router.

Restore to Factory Default Settings: This option will restore all configuration settings back to the settings that were in effect at the time the router was shipped from the factory. Any settings that have not been saved will be lost, including any rules that you have created. If you want to save the current router configuration settings, use the **Save** button above.

Reboot: Click the **Reboot** button on the left side of the window to restart the Router.

DDNS Setting

The router supports DDNS (Dynamic Domain Name Service). The Dynamic DNS service allows a dynamic public IP address to be associated with a static host name in any of the many domains, allowing access to a specified host from various locations on the Internet. This is enabled to allow remote access to a host by clicking a hyperlinked URL in the form “hostname.dyndns.org”. Many ISPs assign public IP addresses using DHCP, this can make it difficult to locate a specific host on the LAN using standard DNS. If for example you are running a public web server or VPN server on your LAN, this ensures that the host can be located from the Internet if the public IP address changes. DDNS requires that an account be setup with one of the supported DDNS providers.

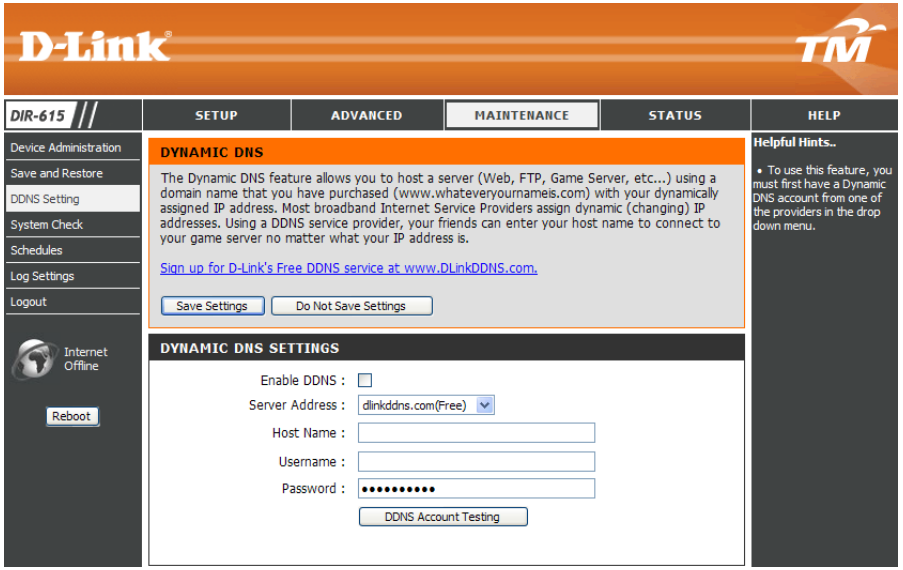
Enable DDNS: Tick the Enable DDNS checkbox to enable support for DDNS.

Server Address: Select one of the DDNS registration organizations form those listed in the pull-down menu. Available servers include *dlinkddns.com(Free)*, *DynDns.org(Custom)*, *Dyn.Dns.org(free)*, and *Dyn.Dns.org(Static)*.

Host Name: Enter the host name of the DDNS server.

Username: Enter the username given to you by your DDNS server.

Password: Enter the password or key given to you by your DDNS server.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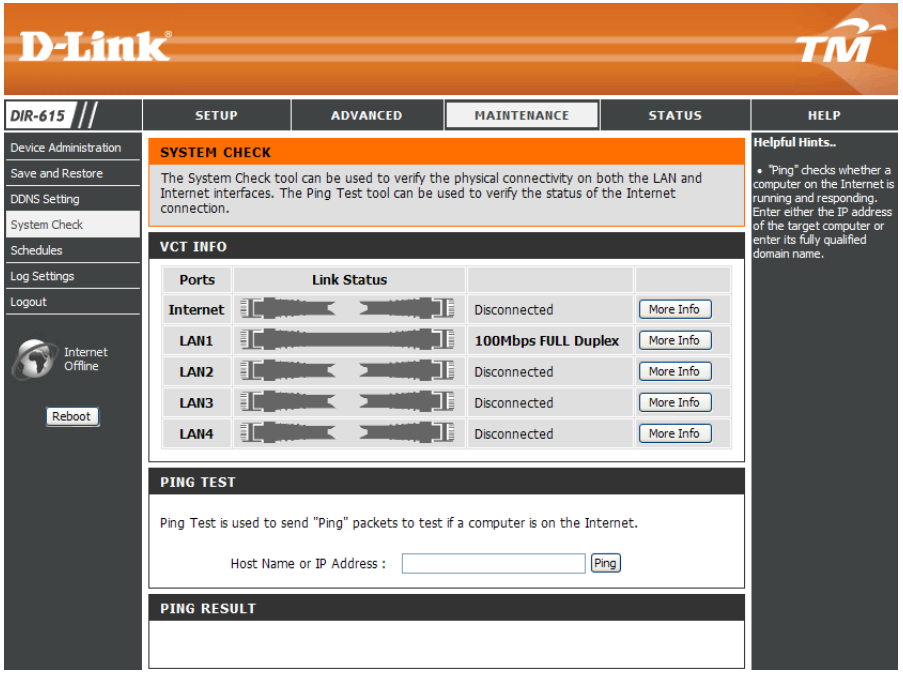
DYNAMIC DNS
The Dynamic DNS feature allows you to host a server (Web, FTP, Game Server, etc...) using a domain name that you have purchased (www.whateveryournames.com) with your dynamically assigned IP address. Most broadband Internet Service Providers assign dynamic (changing) IP addresses. Using a DDNS service provider, your friends can enter your host name to connect to your game server no matter what your IP address is.
Sign up for D-Link's Free DDNS service at www.DLinkDDNS.com.
Save Settings
Do Not Save Settings
DYNAMIC DNS SETTINGS
Enable DDNS :
Server Address : dlinkddns.com(Free)
Host Name :
Username :
Password :
DDNS Account Testing
Helpful Hints..
• To use this feature, you must first have a Dynamic DNS account from one of the providers in the drop down menu.

System Check

This tool is used to verify the physical connectivity on both the LAN and the WAN interfaces. The Ping Test can be used to test the status of the Internet.

Virtual Cable Tester (VCT) Info: VCT is an advanced feature that integrates a LAN cable tester on every Ethernet port on the router. Through the graphical user interface (GUI), VCT can be used to remotely diagnose and report cable faults such as opens, shorts, swaps, and impedance mismatch. This feature significantly reduces service calls and returns by allowing users to easily troubleshoot their cable connections.

Ping Test: The Ping Test is used to send Ping packets to test if a computer is on the Internet. Enter the IP Address that you wish to Ping, and click **Ping**.



Schedules

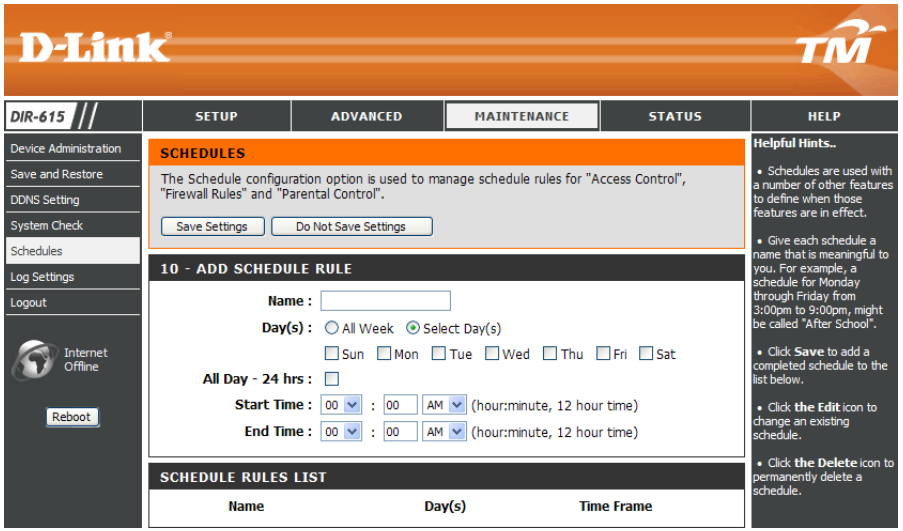
The Router allows the user the ability to manage schedule rules for various firewall and parental control features on this window. Once you have finished configuring the new schedule rule, click the **Save Settings** button at the top of the window.

Name: Enter a name for the new schedule rule.

Day(s): Choose the desired day(s), either All Week or Select Days. If the latter is selected, please use the checkboxes directly below to specify the individual days.

All Day - 24 hrs: Tick this check box if the new schedule rule applies to the full 24-hour period.

Start Time/ End Time: If the new schedule rule does not apply to the full 24-hour period, untick the previous checkbox and then enter a specific beginning and ending time.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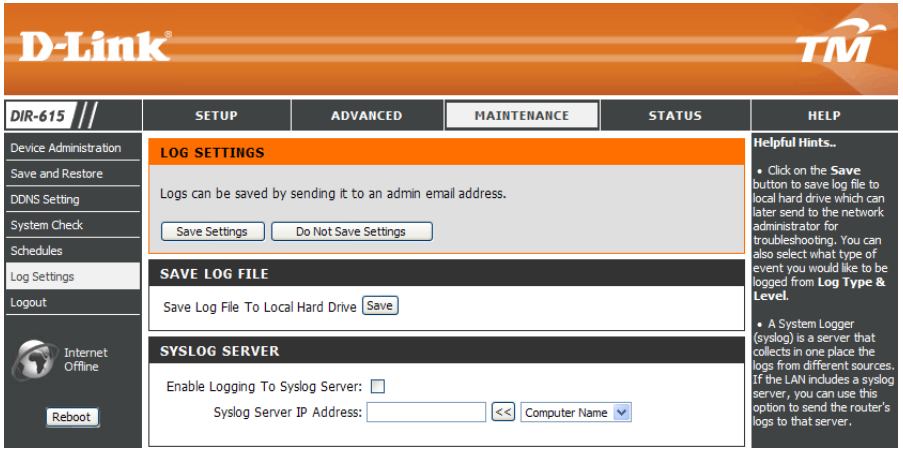
SCHEDULES
The Schedule configuration option is used to manage schedule rules for "Access Control", "Firewall Rules" and "Parental Control".
Save Settings
Do Not Save Settings
10 - ADD SCHEDULE RULE
Name :
Day(s) : All Week Select Day(s)
Sun Mon Tue Wed Thu Fri Sat
All Day - 24 hrs :
Start Time : 00 : 00 AM (hour:minute, 12 hour time)
End Time : 00 : 00 AM (hour:minute, 12 hour time)
SCHEDULE RULES LIST
Name
Day(s)
Time Frame
Helpful Hints..
• Schedules are used with a number of other features to define when those features are in effect.
• Give each schedule a name that is meaningful to you. For example, a schedule for Monday through Friday from 3:00pm to 9:00pm, might be called "After School".
• Click Save to add a completed schedule to the list below.
• Click the Edit icon to change an existing schedule.
• Click the Delete icon to permanently delete a schedule.

Log Settings

The system log displays chronological event log data specified by the router user. You may also save a simple text file containing the log to your computer. Click the **Save** button and follow the prompts to save the file.

Save Log File: Click on the **Save** button link on this window to save the log file to your local hard drive.

Syslog Server: click the checkbox to save the log in the log server in the LAN side.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LOG SETTINGS
Logs can be saved by sending it to an admin email address.
Save Settings
Do Not Save Settings
SAVE LOG FILE
Save Log File To Local Hard Drive
Save
SYSLOG SERVER
Enable Logging To Syslog Server:
Syslog Server IP Address:
<<
Computer Name
Helpful Hints..
• Click on the Save button to save log file to local hard drive which can later send to the network administrator for troubleshooting. You can also select what type of event you would like to be logged from Log Type & Level.
• A System Logger (syslog) is a server that collects in one place the logs from different sources. If the LAN includes a syslog server, you can use this option to send the router's logs to that server.

Device Info

This window displays the current information for the DIR-615. It will display the LAN, WAN, and Wireless information.

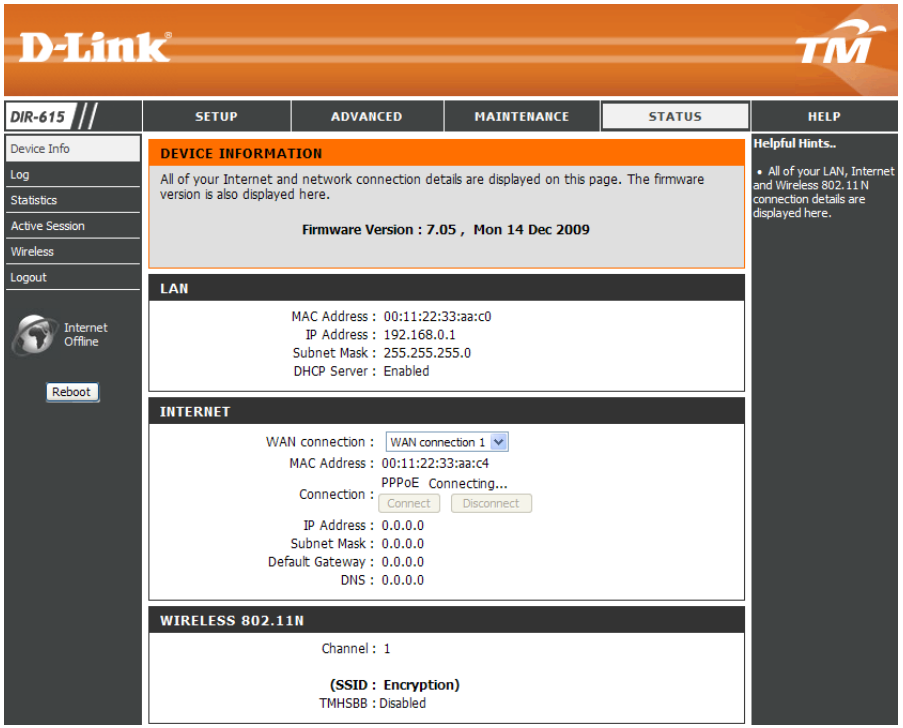
If your WAN connection is set up for a Dynamic IP address then a **DHCP Release** button and a **DHCP Renew** button will be displayed. Use **DHCP Release** to disconnect from your ISP and use **DHCP Renew** to connect to your ISP.

If your WAN connection is set up for PPPoE, a **Connect** button and a **Disconnect** button will be displayed. Use **Disconnect** to drop the PPPoE connection and use **Connect** to establish the PPPoE connection.

LAN: Displays the MAC address and the private (local) IP settings for the router.

WAN: Displays the MAC address and the public IP settings for the router.

Wireless 802.11N: Displays the wireless MAC address and your wireless settings such as SSID, Channel, and Encryption status.



Log

This window allows you to view a log of activities on the Router. This is especially helpful detecting unauthorized network usage.

First Page: View the first page of the log.

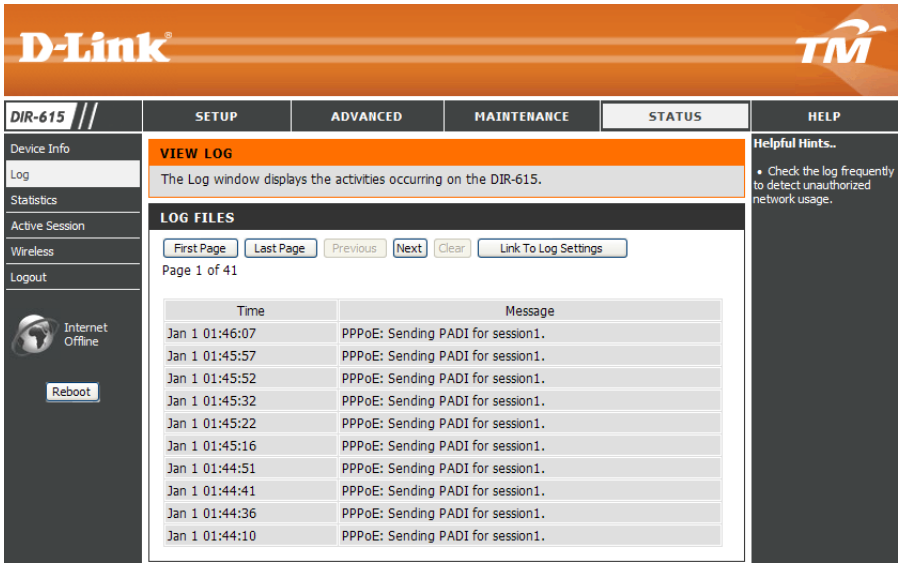
Last Page: View the last page of the log.

Previous: View the previous page.

Next: View the next page.

Clear: Clear the log.

Link to Log Settings: Click this button to go directly to the Log Settings window (**Maintenance** > **Log Settings**).

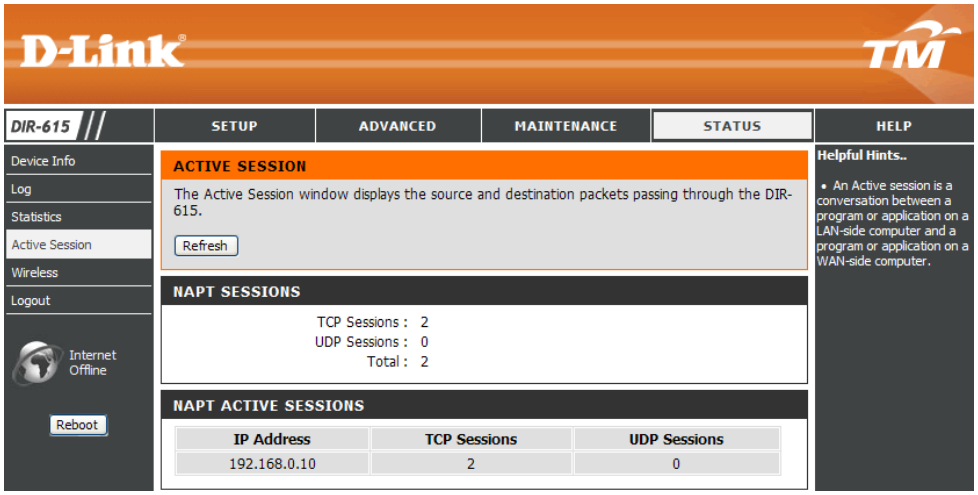


Statistics

The window below displays the Traffic Statistics. Here you can view the amount of packets that pass through the DIR-615 on both the WAN and the LAN ports. The traffic counter will reset if the device is rebooted.

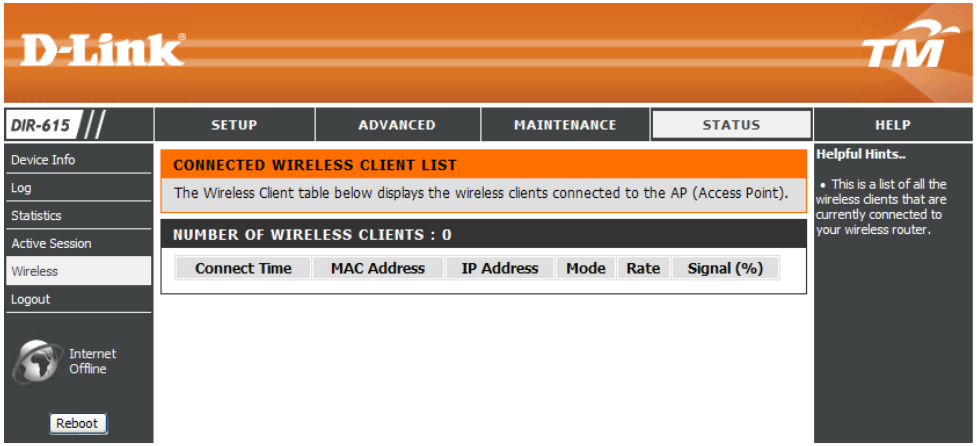
Active Session

The window displays the the source and destination packets passing throught the device.



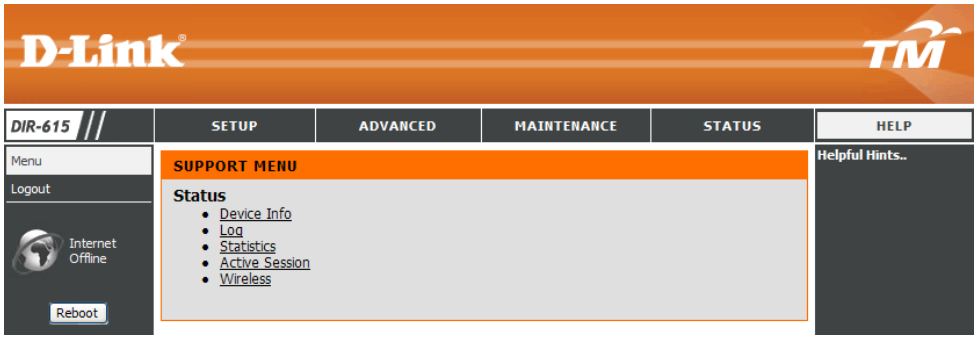
Wireless

The wireless client table displays a list of current connected wireless clients. This table also displays the connection time and MAC address of the connected wireless client.



Help

Click the desired hyperlink to get more information about how to use the Router.



Wireless Security

This section will show you the different levels of security you can use to protect your data from intruders. The DIR-615 offers the following types of security:

- WPA2 (Wi-Fi Protected Access 2)
- WPA (Wi-Fi Protected Access)
- WEP (Wired Equivalent Privacy)
- WPA2-PSK (Pre-Shared Key)
- WPA-PSK (Pre-Shared Key)

What is WEP?

WEP stands for Wired Equivalent Privacy. It is based on the IEEE 802.11 standard and uses the RC4 encryption algorithm. WEP provides security by encrypting data over your wireless network so that it is protected as it is transmitted from one wireless device to another.

To gain access to a WEP network, you must know the key. The key is a string of characters that you create. When using WEP, you must determine the level of encryption. The type of encryption determines the key length. 128-bit encryption requires a longer key than 64-bit encryption. Keys are defined by entering in a string in HEX (hexadecimal - using characters 0-9, A-F) or ASCII (American Standard Code for Information Interchange – alphanumeric characters) format. ASCII format is provided so you can enter a string that is easier to remember. The ASCII string is converted to HEX for use over the network. Four keys can be defined so that you can change keys easily.

Configure WEP

It is recommended to enable encryption on your wireless router before your wireless network adapters. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.

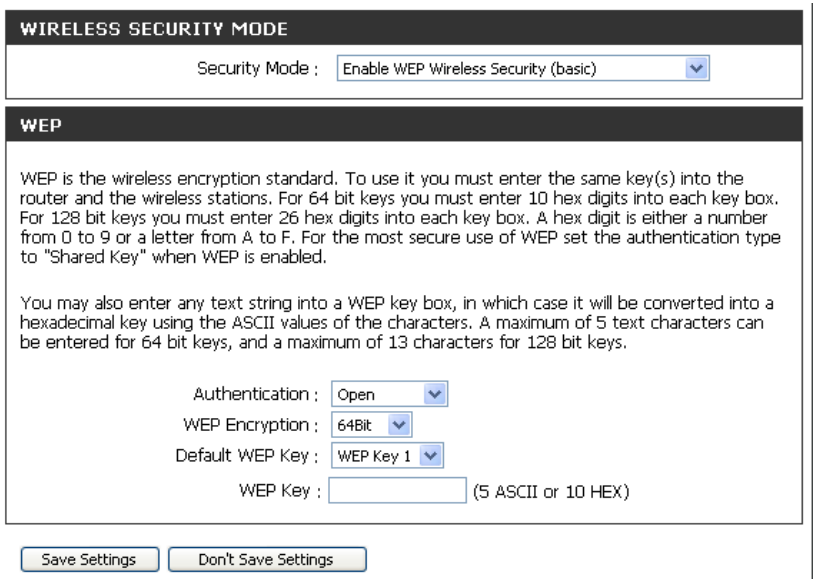
1. Log into the web-based configuration by opening a web browser and entering the IP address of the router (192.168.0.1). Click on **Wireless Setup** on the left side.

2. Next to **Security Mode**, select *Enable WEP Wireless Security (basic)*.

3. Next to **Authentication**, select either *Shared Key or Open*. *Shared Key* is recommended as it provides greater security when WEP is enabled.

4. Select either *64Bit* or *128Bit* encryption from the drop-down menu next to **WEP Encryption**.

5. Next to **Default Key Type**, select *WEP Key 1* and enter a WEP key that you create. Make sure you enter this key exactly on all your wireless devices. You may enter up to four different keys either using *Hex* or *ASCII*. *Hex* is recommended (letters A-F and numbers 0-9 are valid). In *ASCII* all numbers and letters are valid.


WIRELESS SECURITY MODE
Security Mode :
Enable WEP Wireless Security (basic)
WEP
WEP is the wireless encryption standard. To use it you must enter the same key(s) into the router and the wireless stations. For 64 bit keys you must enter 10 hex digits into each key box. For 128 bit keys you must enter 26 hex digits into each key box. A hex digit is either a number from 0 to 9 or a letter from A to F. For the most secure use of WEP set the authentication type to "Shared Key" when WEP is enabled.
You may also enter any text string into a WEP key box, in which case it will be converted into a hexadecimal key using the ASCII values of the characters. A maximum of 5 text characters can be entered for 64 bit keys, and a maximum of 13 characters for 128 bit keys.
Authentication :
Open
WEP Encryption :
64Bit
Default WEP Key :
WEP Key 1
WEP Key :
(5 ASCII or 10 HEX)
Save Settings
Don't Save Settings

6. Click **Save Settings** to save your settings. If you are configuring the router with a wireless adapter, you will lose connectivity until you enable WEP on your adapter and enter the same WEP key as you did on the router.

What is WPA?

WPA, or Wi-Fi Protected Access, is a Wi-Fi standard that was designed to improve the security features of WEP (Wired Equivalent Privacy).

The two major improvements over WEP:

- Improved data encryption through the Temporal Key Integrity Protocol (TKIP). TKIP scrambles the keys using a hashing algorithm and, by adding an integrity-checking feature, ensures that the keys haven't been tampered with. WPA2 is based on 802.11i and uses Advanced Encryption Standard (AES) instead of TKIP.

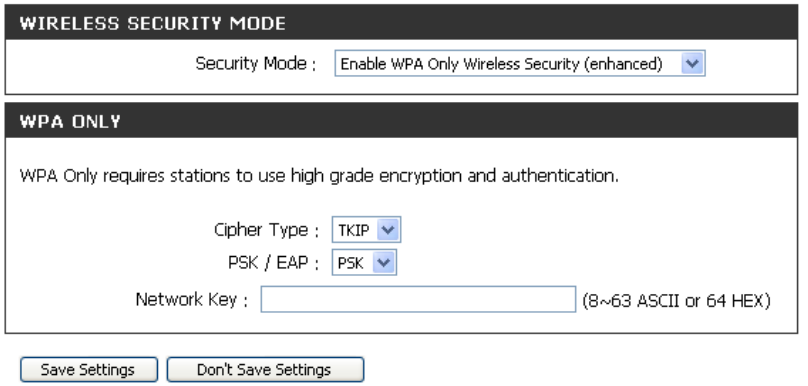
- User authentication, which is generally missing in WEP, through the extensible authentication protocol (EAP). WEP regulates access to a wireless network based on a computer's hardware-specific MAC address, which is relatively simple to be sniffed out and stolen. EAP is built on a more secure public-key encryption system to ensure that only authorized network users can access the network.

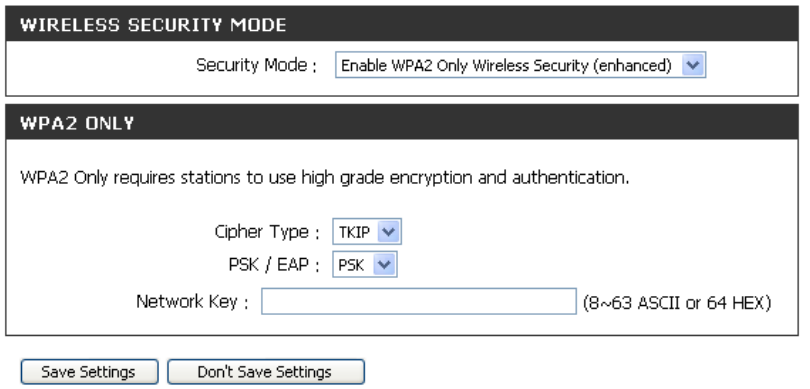
WPA-PSK/WPA2-PSK uses a passphrase or key to authenticate your wireless connection. The key is an alpha-numeric password between 8 and 63 characters long. The password can include symbols (!?*&_) and spaces. This key must be the exact same key entered on your wireless router or access point.

WPA/WPA2 incorporates user authentication through the Extensible Authentication Protocol (EAP). EAP is built on a more secure public key encryption system to ensure that only authorized network users can access the network.

Configure WPA-PSK and WPA2-PSK

It is recommended to enable encryption on your wireless Router before your wireless network adapters. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.


WIRELESS SECURITY MODE
Security Mode : Enable WPA Only Wireless Security (enhanced)
WPA ONLY
WPA Only requires stations to use high grade encryption and authentication.
Cipher Type : TKIP
PSK / EAP : PSK
Network Key : (8~63 ASCII or 64 HEX)
Save Settings
Don't Save Settings


WIRELESS SECURITY MODE
Security Mode : Enable WPA2 Only Wireless Security (enhanced)
WPA2 ONLY
WPA2 Only requires stations to use high grade encryption and authentication.
Cipher Type : TKIP
PSK / EAP : PSK
Network Key : (8~63 ASCII or 64 HEX)
Save Settings
Don't Save Settings

1. Log into the web-based configuration by opening a web browser and entering the IP address of the router (192.168.0.1). Click on **Wireless Setup** on the left side.

2. Next to **Security Mode**, select *Enable WPA Only Wireless Security (enhanced)* or *Enable WPA2 Only Wireless Security (enhanced)*.

3. Next to **Cipher Mode**, select *TKIP*, *AES*, or *Both*.

4. Next to **PSK/EAP**, select *PSK*.

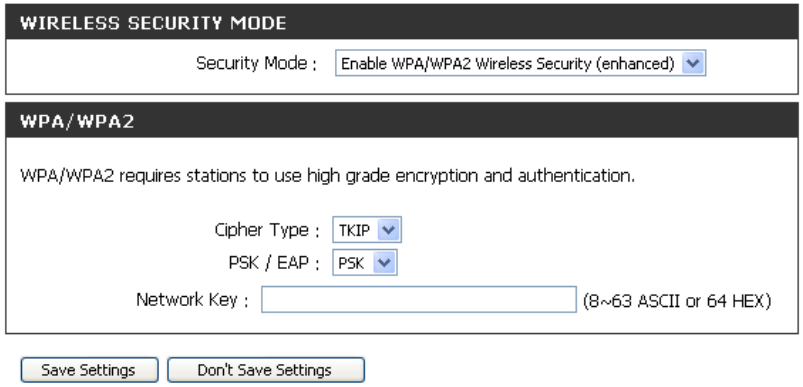
5. Next to **Network Key**, enter a key (passphrase). The key is an alpha-numeric password between 8 and 63 characters long. The password can include symbols (!?*&_) and spaces. Make sure you enter this key exactly the same on all other wireless clients.

6. Click **Save Settings** to save your settings. If you are configuring the Router with a wireless adapter, you will lose connectivity until you enable WPA-PSK or WPA2-PSK on your adapter and enter the same passphrase as you did on the Router.

Configure WPA/WPA2-PSK

It is recommended to enable encryption on your wireless Router before your wireless network adapters. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.

1. Log into the web-based configuration by opening a web browser and entering the IP address of the router (192.168.0.1). Click on **Wireless Setup** on the left side.



2. Next to **Security Mode**, select *Enable WPA/WPA2 Wireless Security (enhanced)*.

3. Next to **Cipher Mode**, select *TKIP*, *AES*, or *Both*.

4. Next to **PSK/EAP**, select *PSK*.

5. Next to **Network Key**, enter a key (passphrase). The key is an alpha-numeric password between 8 and 63 characters long. The password can include symbols (!?*&_) and spaces. Make sure you enter this key exactly the same on all other wireless clients.

6. Click **Save Settings** to save your settings. If you are configuring the Router with a wireless adapter, you will lose connectivity until you enable WPA/WPA2-PSK on your adapter and enter the same passphrase as you did on the Router.

Configure WPA, WPA2, and WPA/WPA2 (RADIUS)

It is recommended to enable encryption on your wireless router before your wireless network adapters. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.

1. Log into the web-based configuration by opening a web browser and entering the IP address of the router (192.168.0.1). Click on **Wireless Settings** on the left side.

2. Next to **Security Mode**, select *Enable WPA Only Wireless Security (enhanced), Enable WPA2 Only Wireless Security (enhanced),* or *Enable WPA/WPA2 Wireless Security (enhanced)*.

3. Next to **Cipher Type**, select *TKIP*, *AES*, or *Auto*.

4. Next to **PSK/EAP**, select *EAP*.

5. Next to **RADIUS Server 1** enter the **IP Address** of your RADIUS server.

6. Next to **Port**, enter the port you are using with your RADIUS server. *1812* is the default port.

7. Next to **Shared Secret**, enter the security key.

8. If you have a secondary RADIUS server, enter its IP address, port, and secret key.

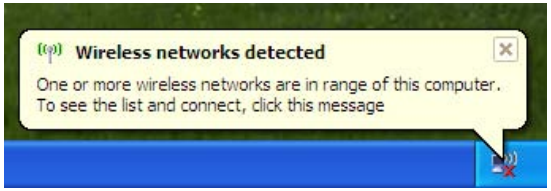
9. Click **Save Settings** to save your settings.

WIRELESS SECURITY MODE
Security Mode : Enable WPA Only Wireless Security (enhanced)
WPA ONLY
WPA Only requires stations to use high grade encryption and authentication.
Cipher Type : TKIP
PSK / EAP : EAP
802.1X
RADIUS Server 1 IP Address :
Port :
Shared Secret :
RADIUS Server 2 IP Address :
Port :
Shared Secret :

Connect to a Wireless Network Using Windows® XP

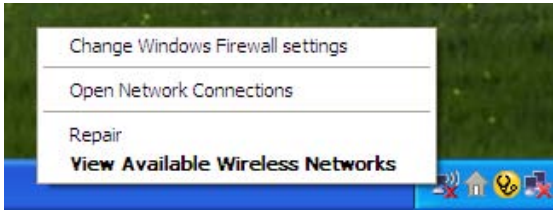
Windows® XP users may use the built-in wireless utility (Zero Configuration Utility). The following instructions are for Service Pack 2 users. If you are using another company's utility or Windows® 2000, please refer to the user manual of your wireless adapter for help with connecting to a wireless network. Most utilities will have a "site survey" option similar to the Windows® XP utility as seen below.

If you receive the **Wireless Networks Detected** bubble, click on the center of the bubble to access the utility.


Wireless networks detected
One or more wireless networks are in range of this computer.
To see the list and connect, click this message

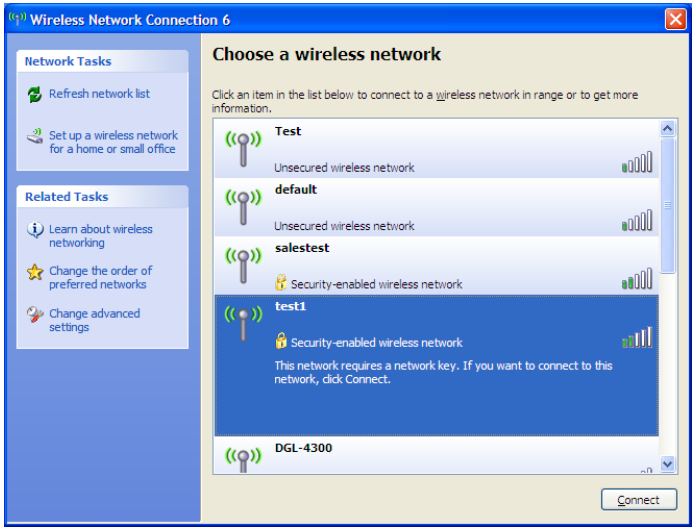
or

Right-click on the wireless computer icon in your system tray (lower-right corner next to the time). Select **View Available Wireless Networks**.



The utility will display any available wireless networks in your area. Click on a network (displayed using the SSID) and click the **Connect** button.

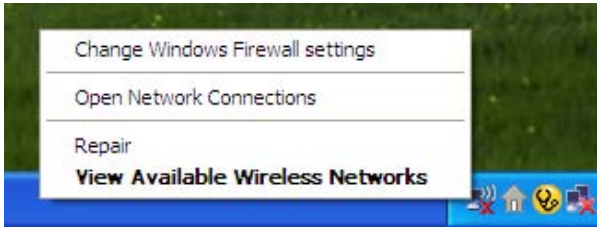
If you get a good signal but cannot access the Internet, check you TCP/IP settings for your wireless adapter. Refer to the **Networking Basics** section in this manual for more information.


Wireless Network Connection 6
Network Tasks
Refresh network list
Set up a wireless network for a home or small office
Related Tasks
Learn about wireless networking
Change the order of preferred networks
Change advanced settings
Choose a wireless network
Click an item in the list below to connect to a wireless network in range or to get more information.
Test
Unsecured wireless network
default
Unsecured wireless network
salestest
Security-enabled wireless network
test1
Security-enabled wireless network
This network requires a network key. If you want to connect to this network, click Connect.
DGL-4300
Connect

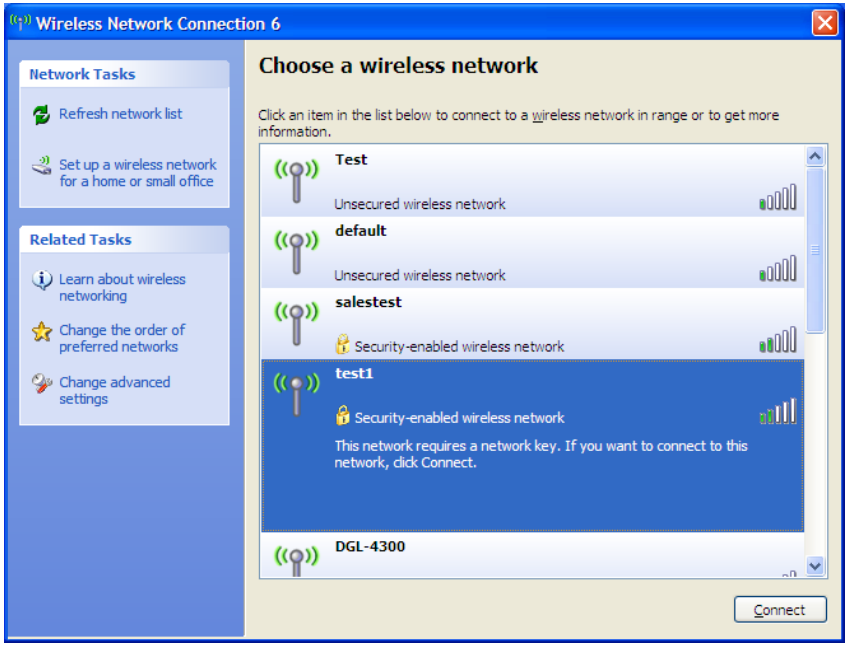
Configure WEP

It is recommended to enable WEP on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the WEP key being used.

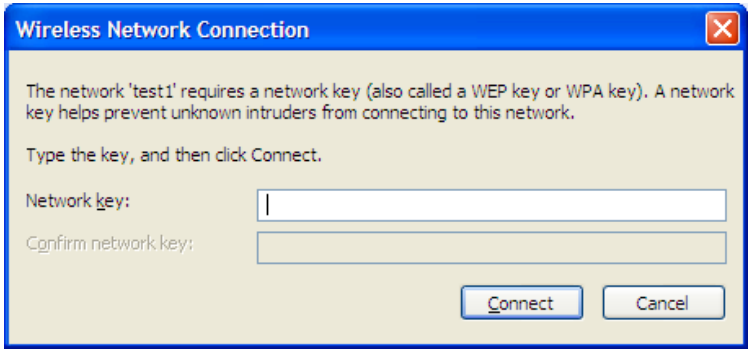
1. Open the Windows® XP Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower-right corner of screen). Select **View Available Wireless Networks**.



2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.


Wireless Network Connection 6
Network Tasks
Refresh network list
Set up a wireless network for a home or small office
Related Tasks
Learn about wireless networking
Change the order of preferred networks
Change advanced settings
Choose a wireless network
Click an item in the list below to connect to a wireless network in range or to get more information.
Test
Unsecured wireless network
default
Unsecured wireless network
salestest
Security-enabled wireless network
test1
Security-enabled wireless network
This network requires a network key. If you want to connect to this network, click Connect.
DGL-4300
Connect

3. The **Wireless Network Connection** box will appear. Enter the same WEP key that is on your router and click **Connect**.

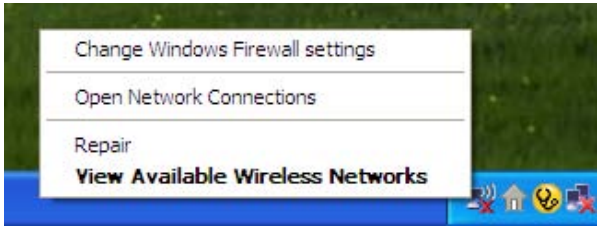

Wireless Network Connection
The network 'test1' requires a network key (also called a WEP key or WPA key). A network key helps prevent unknown intruders from connecting to this network.
Type the key, and then click Connect.
Network key:
Confirm network key:
Connect
Cancel

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the WEP settings are correct. The WEP key must be exactly the same as on the wireless router.

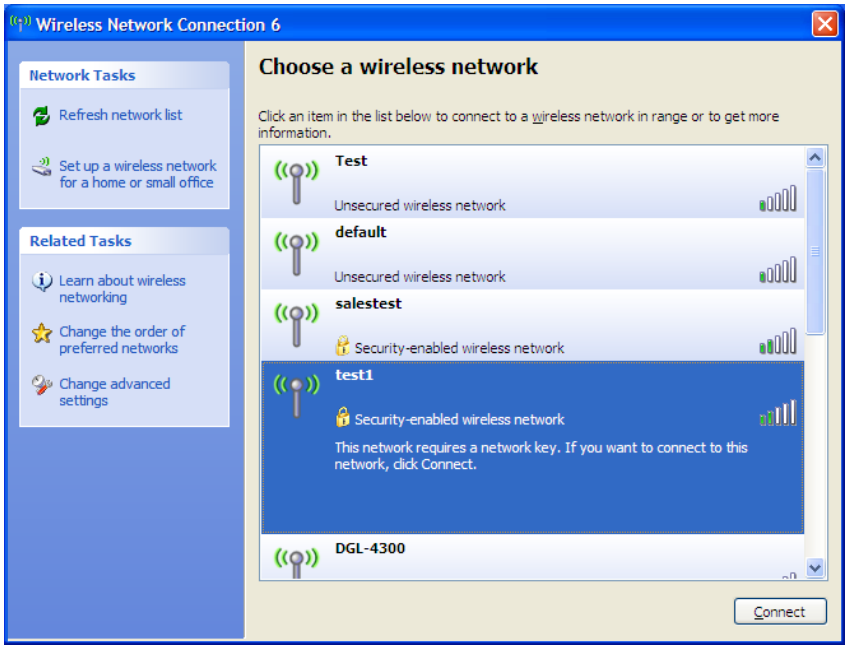
Configure WPA-PSK

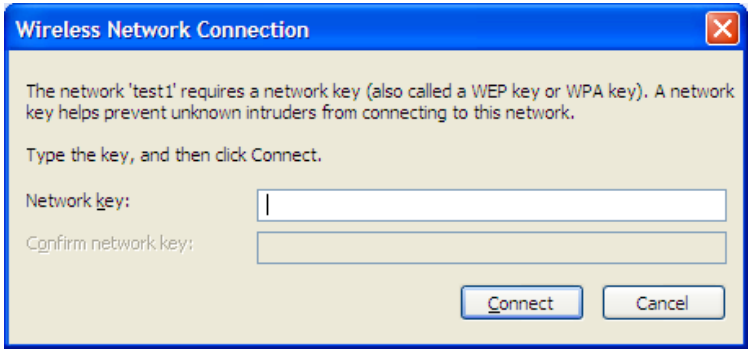
It is recommended to enable WEP on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the WEP key being used.

1. Open the Windows® XP Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower-right corner of screen). Select **View Available Wireless Networks**.



2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.


Wireless Network Connection 6
Network Tasks
Refresh network list
Set up a wireless network for a home or small office
Related Tasks
Learn about wireless networking
Change the order of preferred networks
Change advanced settings
Choose a wireless network
Click an item in the list below to connect to a wireless network in range or to get more information.
Test
Unsecured wireless network
default
Unsecured wireless network
salestest
Security-enabled wireless network
test1
Security-enabled wireless network
This network requires a network key. If you want to connect to this network, click Connect.
DGL-4300
Connect


Wireless Network Connection
The network 'test1' requires a network key (also called a WEP key or WPA key). A network key helps prevent unknown intruders from connecting to this network.
Type the key, and then click Connect.
Network key:
Confirm network key:
Connect
Cancel

3. The **Wireless Network Connection** box will appear. Enter the WPA-PSK passphrase and click **Connect**.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the WPA-PSK settings are correct. The WPA-PSK passphrase must be exactly the same as on the wireless router.

Setting Up Wi-Fi Protection (WCN 2.0 in Windows Vista)

The DIR-615 supports Wi-Fi protection, referred to as WCN 2.0 in Windows Vista. The instructions for setting this up depend on whether you are using Windows Vista to configure the Router or third party software.

Initial Router Configuration for Wi-Fi Protection

When you first set up the Router, Wi-Fi protection is disabled and unconfigured. To enjoy the benefits of Wi-Fi protection, the Router must be both enabled and configured. There are three basic methods to accomplish this: use Windows Vista's built-in support for WCN 2.0, use software provided by a third party, or use the traditional Ethernet approach.

If you are running Windows Vista, tick the Enable checkbox on the **Wireless Network** window. Use the Current PIN that is displayed on the **Wireless Network** window or choose to click the **Generate New PIN** button or **Reset PIN to Default** button.

WI-FI PROTECTED SETUP (ALSO CALLED WCN 2.0 IN WINDOW VISTA)
Enable :
Current PIN : 83449611
Generate New PIN
Reset PIN to Default
Wi-Fi Protected Status : Enabled / Not Configured
Reset to Unconfigured
Add Wireless Device Wizard

If you are using third party software to set up Wi-Fi Protection, carefully follow the directions. When you are finished, proceed to the next section to set up the newly-configured Router.

Setting Up a Configured Router

Once the Router has been configured, you can use the push button on the Router or third party software to invite a newcomer to join your Wi-Fi protected network. For maximum security, the software method is recommended. However, the push button method is ideal if there is no access to a GUI.

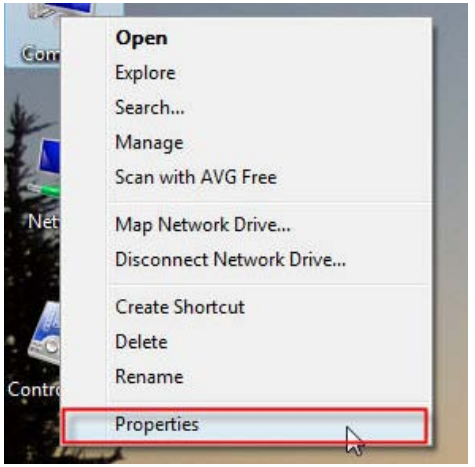
If you are using the Router's Wi-Fi Security push button option, simultaneously depress the push button located on the side of the Router and the button on the client (or virtual button on the client's GUI). Next click **Finish**. The Client's software will then allow a newcomer to join your secure, Wi-Fi protected network.

If you are using third party software, run the appropriate Wi-Fi Protected System utility. You will be asked to either use the push button method or to manually enter the PIN. Follow the on-screen instructions.

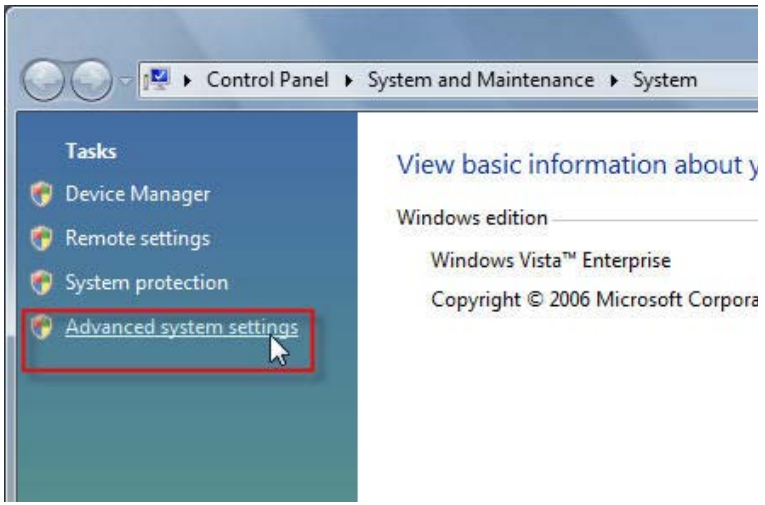
Changing the Computer Name and Joining a Workgroup

The following are step-by-step directions to change the computer name and join a workgroup.

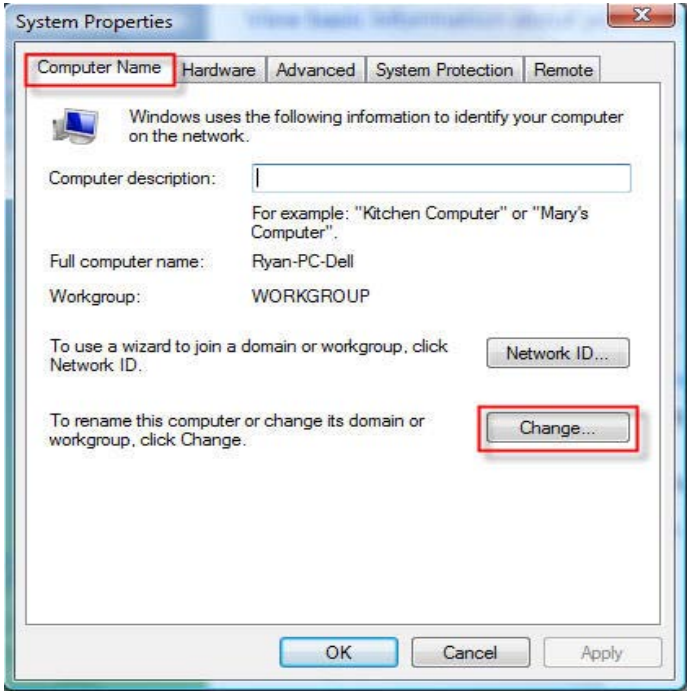
1. Click on **Properties**.



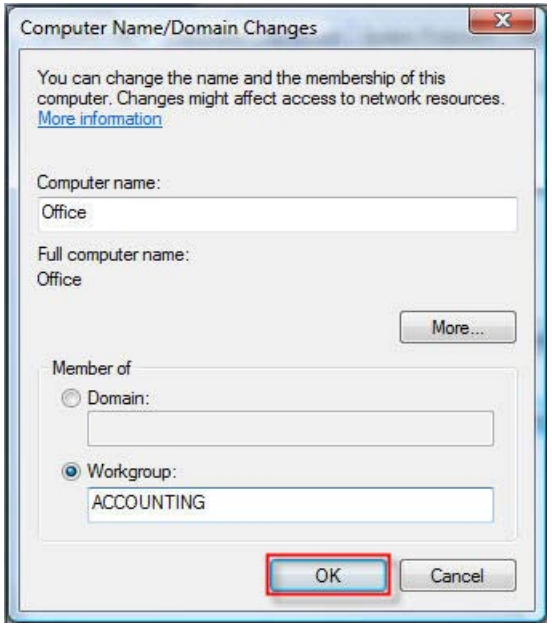
2. Click on the **Advanced system settings** link.



3. Click the **Computer Name** tab in the **System Properties** window and enter a description of your computer in the textbox. When you are finished, click the **Change** button.



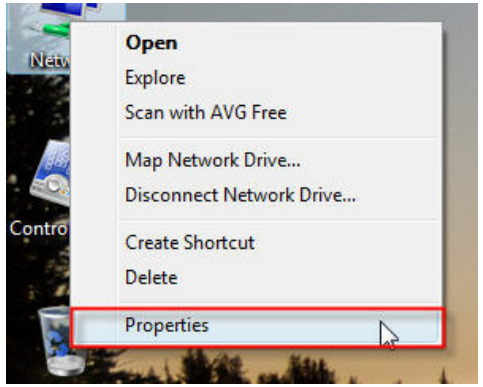
4. Go to the **Computer Name/Domain Changes** window and click the radio button next to the Workgroup you want to join. When you are finished, click the **OK** button.



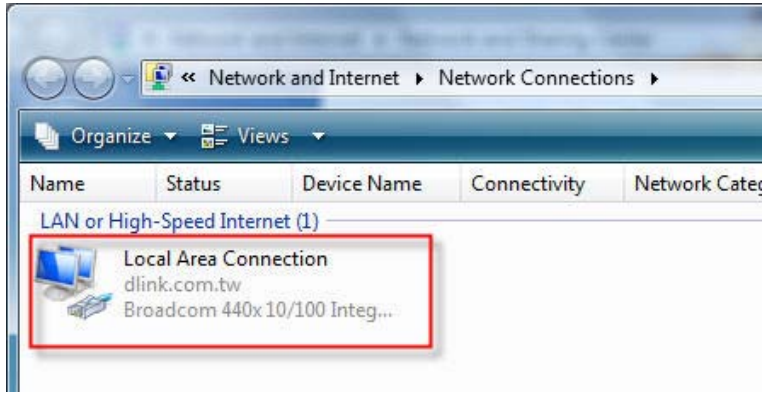
Configuring the IP Address in Vista

The following are step-by-step directions to configure the IP address in Windows Vista.

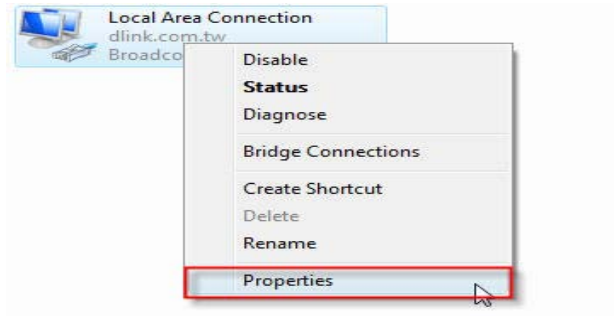
1. Click on **Properties**.



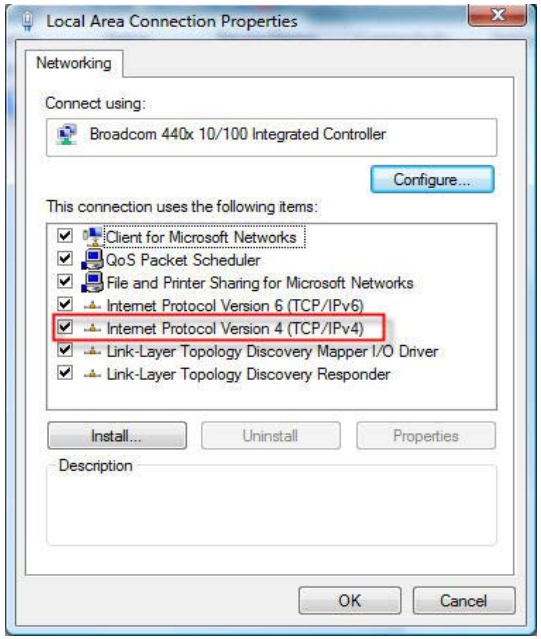
2. Go to the **Network and Internet** window and click the appropriate **Local Area Connection** icon.



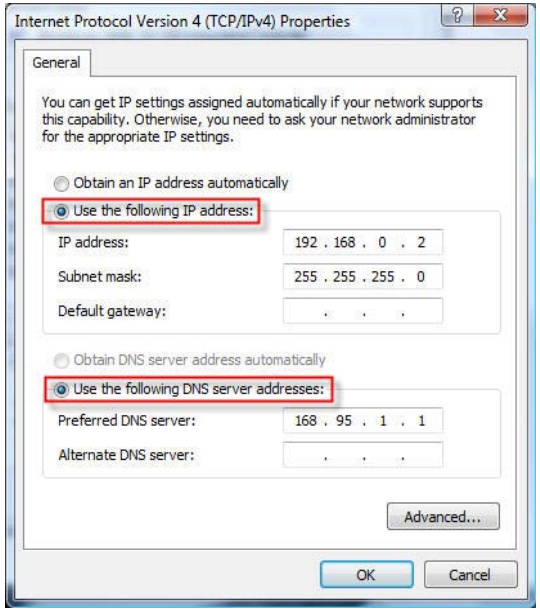
3. Right-click the **Local Area Connection** icon and then select **Properties** from the drop-down menu.



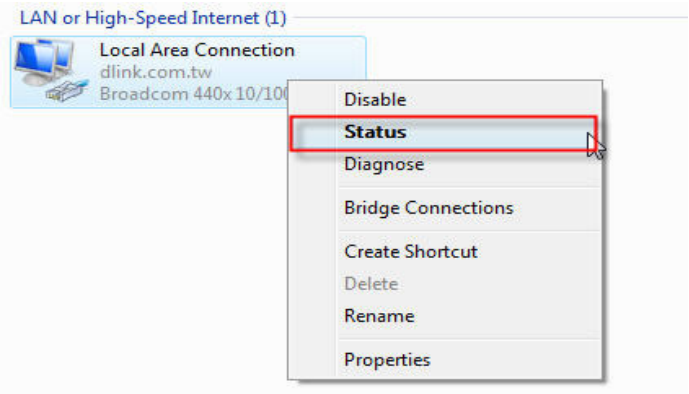
4. Tick the **Internet Protocol Version 4 (TCP/IPv4)** checkbox in the **Networking** tab in the **Local Area Connection Properties** window.



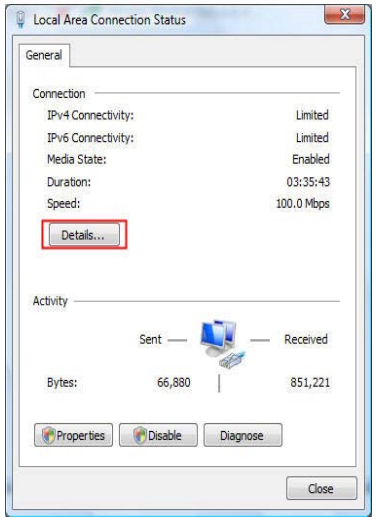
5. Click the “Use the following IP address” option in the **General** tab in the **Local Area Connections Properties** window and enter the desired IP address in the space offered. Then click the “Use the following DNS server adresses” option on the same tab and enter the desired DNS server information.


Internet Protocol Version 4 (TCP/IPv4) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 192 . 168 . 0 . 2
Subnet mask: 255 . 255 . 255 . 0
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server: 168 . 95 . 1 . 1
Alternate DNS server:
Advanced...
OK
Cancel

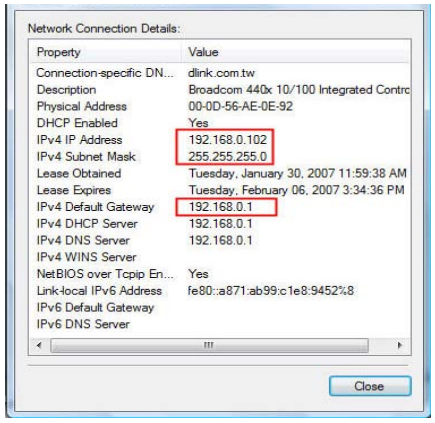
6. Right-click the **Local Area Connection** icon and then select **Status** from the drop-down menu.



7. Go to the **Local Area Connection Status** window and click the **Details** button.



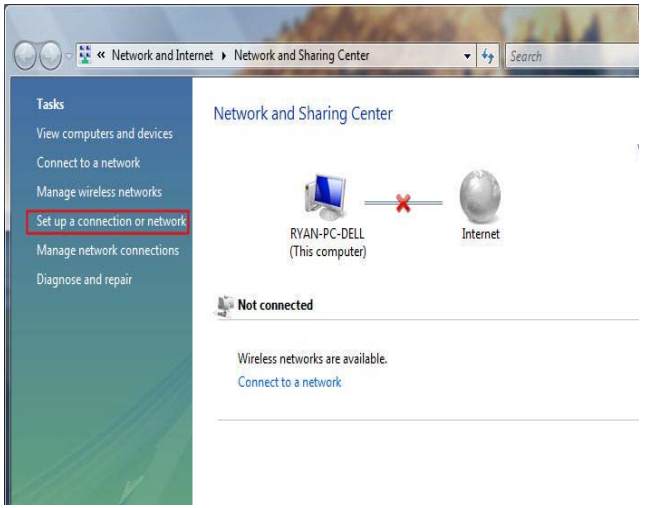
8. Confirm your new settings on the **Network Connection Status** window. When you are finished, click the **Done** button.



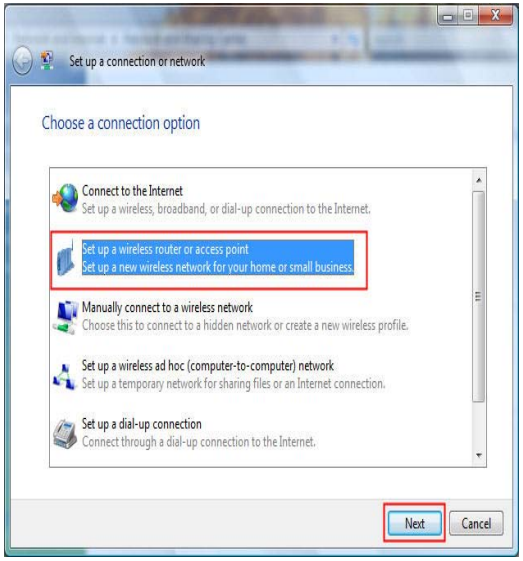
Setting Up a Connection or Network Wirelessly

The following are step-by-step directions to set up a wireless connection.

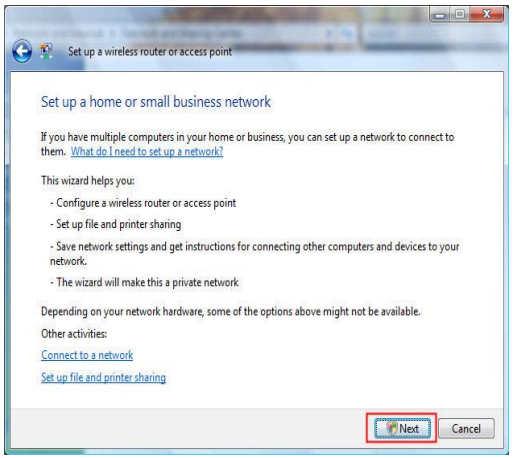
1. Click on **Set up a connection or network in the Network and Sharing Center** section.



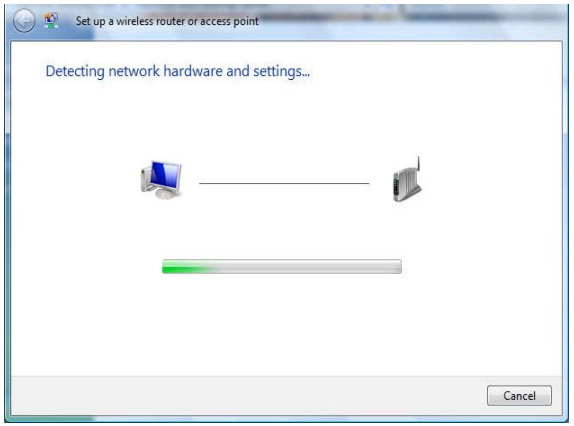
2. Go to the **Set up a connection or network** window and choose the **Set up a wireless router or access point Set up a new wireless network for your home or business** option. Click the **Next** button.


Set up a connection or network
Choose a connection option
Connect to the Internet
Set up a wireless, broadband, or dial-up connection to the Internet.
Set up a wireless router or access point
Set up a new wireless network for your home or small business
Manually connect to a wireless network
Choose this to connect to a hidden network or create a new wireless profile.
Set up a wireless ad hoc (computer-to-computer) network
Set up a temporary network for sharing files or an Internet connection.
Set up a dial-up connection
Connect through a dial-up connection to the Internet.
Next
Cancel

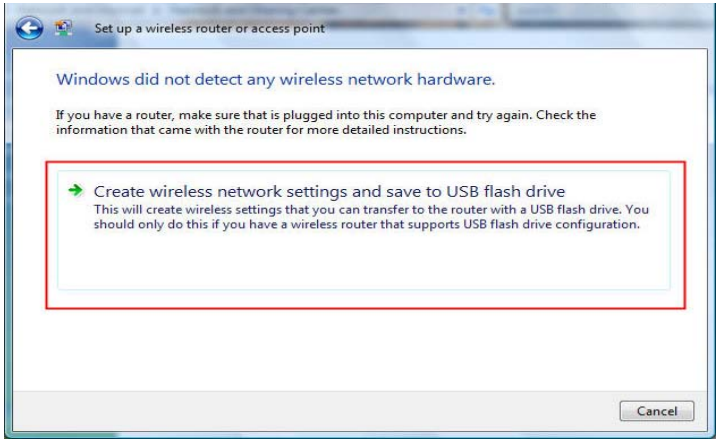
3. Click the **Next** button on the **Set up a wireless router or access point** window.


Set up a wireless router or access point
Set up a home or small business network
If you have multiple computers in your home or business, you can set up a network to connect to them. What do I need to set up a network?
This wizard helps you:
- Configure a wireless router or access point
- Set up file and printer sharing
- Save network settings and get instructions for connecting other computers and devices to your network.
- The wizard will make this a private network
Depending on your network hardware, some of the options above might not be available.
Other activities:
Connect to a network
Set up file and printer sharing
Next
Cancel

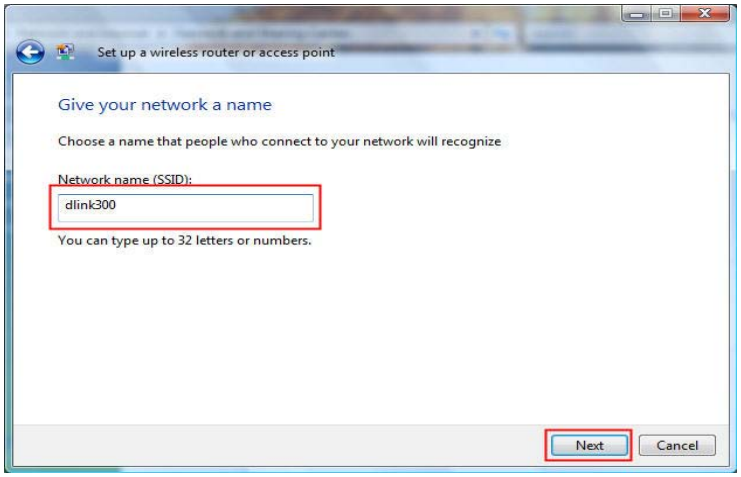
4. The following window displays the system progress.



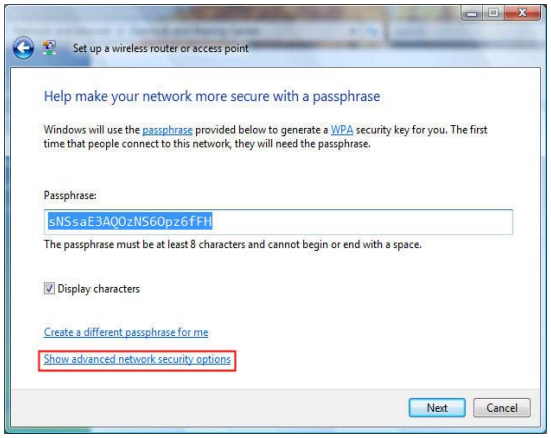
5. This window confirms that you want to create wireless network settings that are savable to a USB flash drive.


Set up a wireless router or access point
Windows did not detect any wireless network hardware.
If you have a router, make sure that is plugged into this computer and try again. Check the information that came with the router for more detailed instructions.
Create wireless network settings and save to USB flash drive
This will create wireless settings that you can transfer to the router with a USB flash drive. You should only do this if you have a wireless router that supports USB flash drive configuration.
Cancel

6. Enter a network name on the **Give your network a name** window in the **Set up a wireless router or access point** wizard. Click the **Next** button.


Set up a wireless router or access point
Give your network a name
Choose a name that people who connect to your network will recognize
Network name (SSID):
dlink300
You can type up to 32 letters or numbers.
Next
Cancel

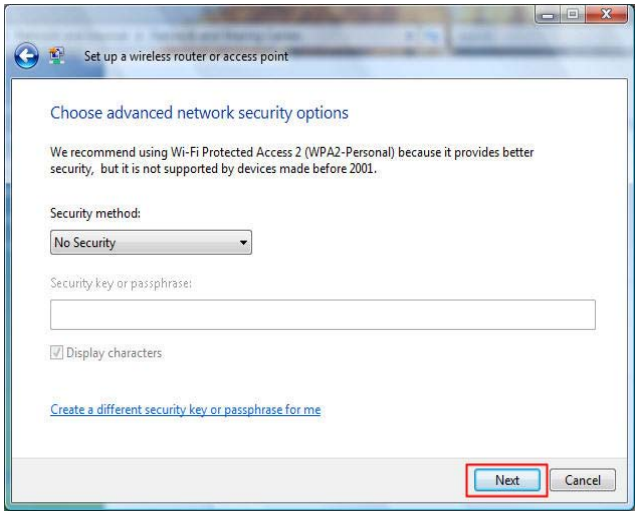
7. Enter a passphrase on the **Help make your network more secure with a passphrase** window in the **Set up a wireless router or access point** wizard. Click the **Show advanced network security options** link.


Set up a wireless router or access point
Help make your network more secure with a passphrase
Windows will use the passphrase provided below to generate a WPA security key for you. The first time that people connect to this network, they will need the passphrase.
Passphrase:
sNSsaE3AQOzNS6Opz6fFH
The passphrase must be at least 8 characters and cannot begin or end with a space.
Display characters
Create a different passphrase for me
Show advanced network security options
Next
Cancel

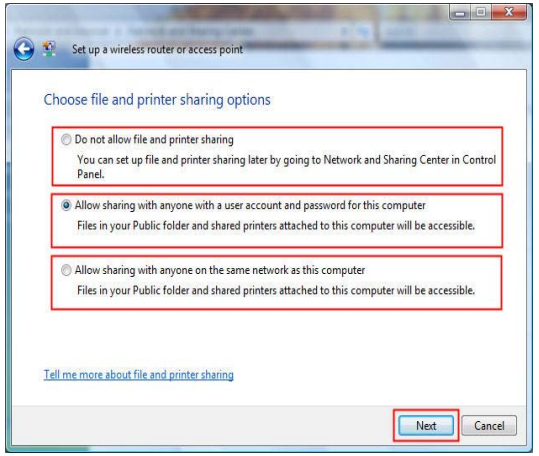
8. Select security method on the **Choose advanced network security options** window in the **Set up a wireless router or access point** wizard. Click the **Next** button.

Set up a wireless router or access point
Choose advanced network security options
We recommend using Wi-Fi Protected Access 2 (WPA2-Personal) because it provides better security, but it is not supported by devices made before 2001.
Security method:
WPA-Personal
WPA-Personal
WPA2-Personal
WEP
No Security
Display characters
Create a different security key or passphrase for me
Next
Cancel

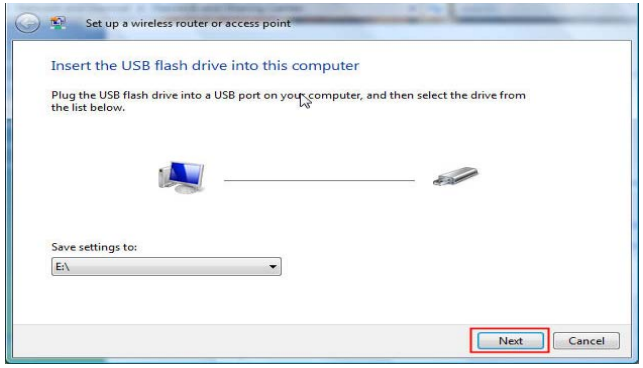
9. Once you have selected the desired security method on the **Choose advanced network security options** window in the **Set up a wireless router or access point** wizard, click the **Next** button.


Set up a wireless router or access point
Choose advanced network security options
We recommend using Wi-Fi Protected Access 2 (WPA2-Personal) because it provides better security, but it is not supported by devices made before 2001.
Security method:
No Security
Security key or passphrase:
Display characters
Create a different security key or passphrase for me
Next
Cancel

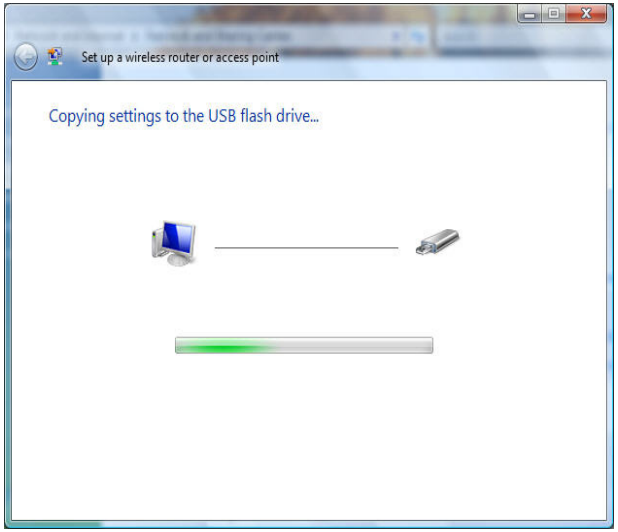
10. Select the desired file and printer sharing option on the **Choose file and printer sharing options** window in the **Set up a wireless router or access point** wizard. Click the **Next** button.


Set up a wireless router or access point
Choose file and printer sharing options
Do not allow file and printer sharing
You can set up file and printer sharing later by going to Network and Sharing Center in Control Panel.
Allow sharing with anyone with a user account and password for this computer
Files in your Public folder and shared printers attached to this computer will be accessible.
Allow sharing with anyone on the same network as this computer
Files in your Public folder and shared printers attached to this computer will be accessible.
Tell me more about file and printer sharing
Next
Cancel

11. Once you have saved your network settings to USB, use the pull-down menu on the **Insert the USB flash drive into this computer** window in the **Set up a wireless router or access point** wizard to select a destination for your network settings. Click the **Next** button.


Set up a wireless router or access point
Insert the USB flash drive into this computer
Plug the USB flash drive into a USB port on your computer, and then select the drive from the list below.
Save settings to:
E:\
Next
Cancel

12. Once you have saved your network settings to USB, the **Copying settings to the USB drive** window in the **Set up a wireless router or access point** wizard opens to indicate the system progress.



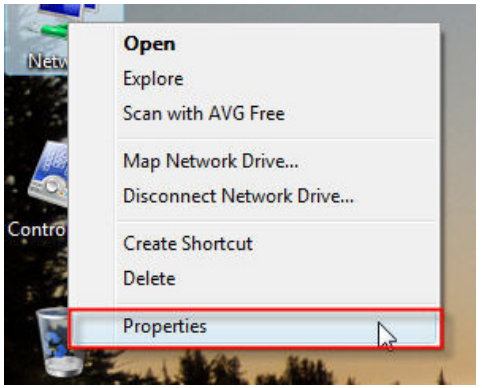
13. Once you are finished, the **To add a device or computer, follow these instructions** window in the **Set up a wireless router or access point** wizard opens. When you are finished, click the **Close** button.

Set up a wireless router or access point
To add a device or computer, follow these instructions
1 Remove the USB flash drive from this computer.
2 Insert the USB flash drive into a USB port on the device or the computer. (Computers must be running Windows XP or Windows Vista.)
3 For devices, follow the instructions in the information that came with the device, or on the LCD of the device, if applicable.
For more detailed instructions, click here.
Repeat steps 2 and 3 for each device or computer that you want to add.
Close

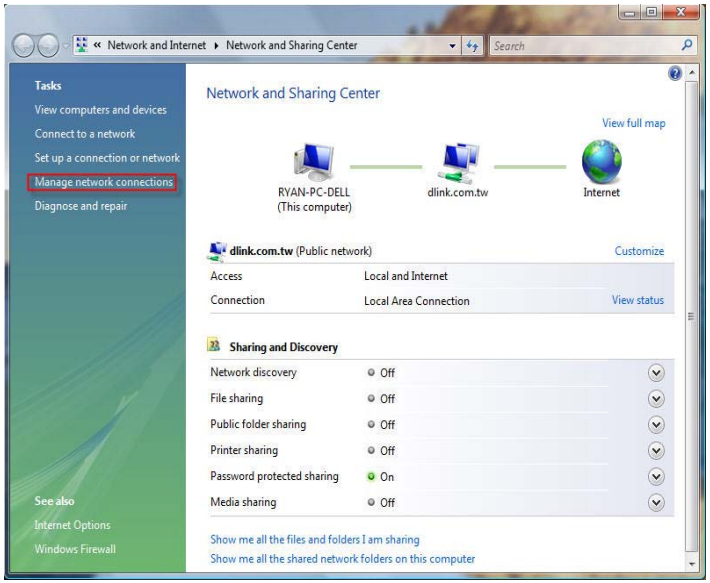
Connecting to a Secured Wireless Network (WEP, WPA-PSK & WPA2-PSK)

The following are step-by-step directions to set up a wireless connection.

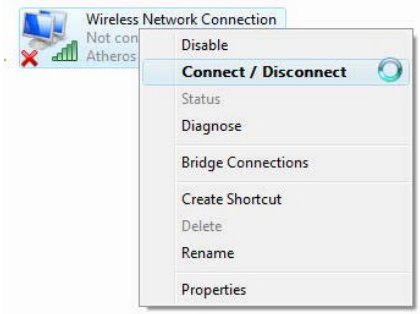
1. Click on **Properties**.



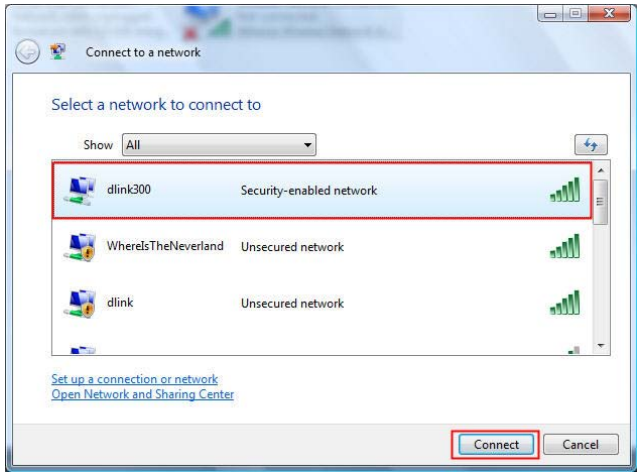
2. Click the **Manage network connections** link in the **Network and Sharing Center** window.



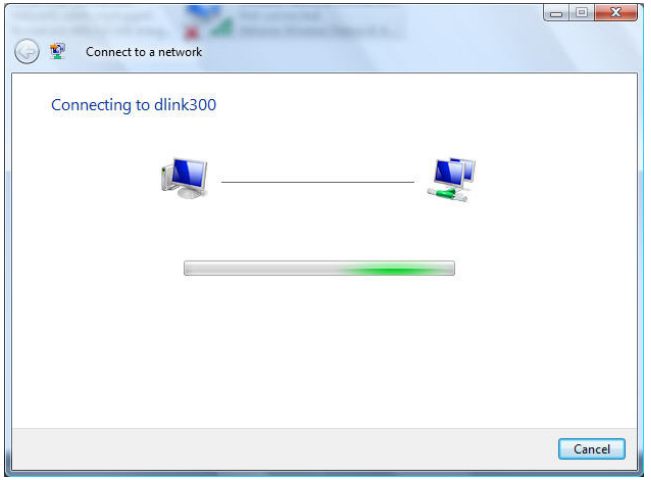
3. Right-click the **Wireless Network Connection** entry and then select **Connect/Disconnect** from the drop-down menu.



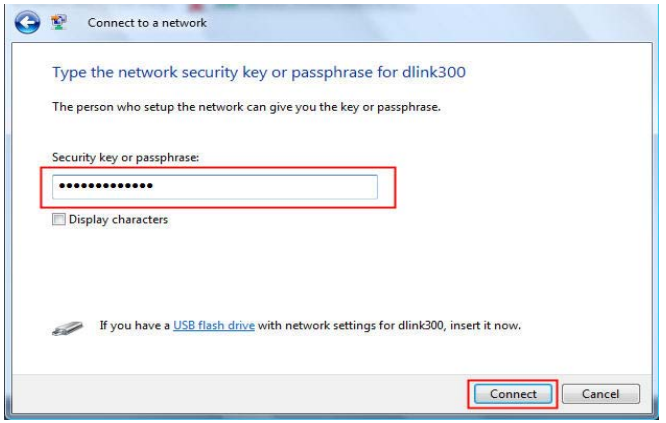
4. Select a network to connect to in the **Select a network to connect to** window in the **Connect to a network** wizard and then click the **Connect** button.



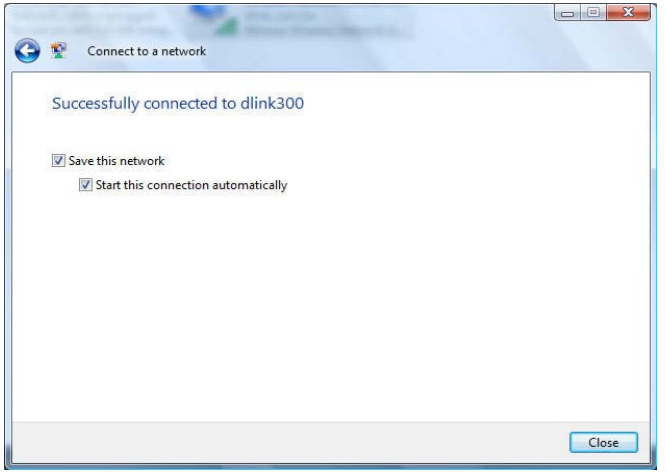
5. The following **Connect to a network** wizard window displays the system progress.



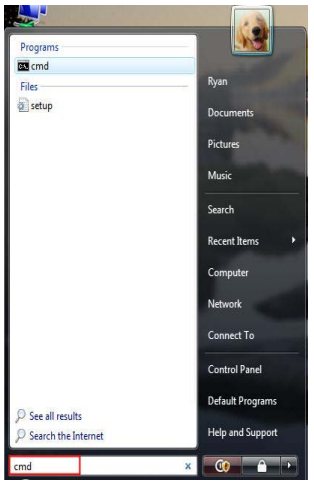
6. Enter the network security key or passphrase for the Router in the textbox provided in the **Type the network security key or passphrase for dlink300** window in the **Connect a network** wizard. When you are finished, click the **Connect** button.


Connect to a network
Type the network security key or passphrase for dlink300
The person who setup the network can give you the key or passphrase.
Security key or passphrase:
Display characters
If you have a USB flash drive with network settings for dlink300, insert it now.
Connect
Cancel

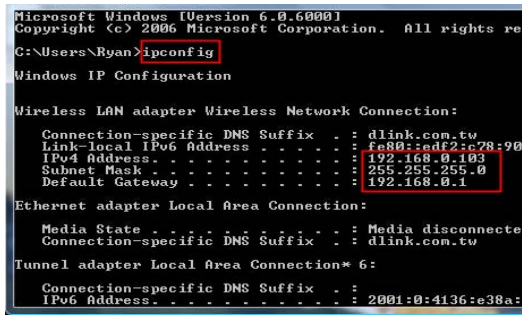
7. The following **Successfully connected to dlink300** window in the **Connect to a network** wizard is displayed. Choose to save to the network and/or start the new connection automatically. When you are finished, click the **Close** button.



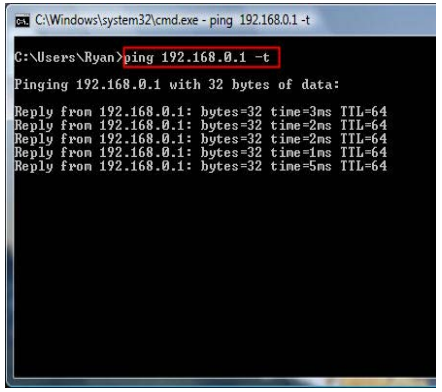
8. The successful connection is displayed at the bottom of the Windows start up menu.



9. Confirm your new settings by calling up the command prompt and then entering the ipconfig command.


Microsoft Windows [Version 6.0.6000]
Copyright (c) 2006 Microsoft Corporation. All rights re
C:\Users\Ryan>ipconfig
Windows IP Configuration
Wireless LAN adapter Wireless Network Connection:
Connection-specific DNS Suffix . : dlink.com.tw
Link-local IPv6 Address . . . . . : fe80::edf2:c78:90
IPv4 Address. . . . . : 192.168.0.103
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.0.1
Ethernet adapter Local Area Connection:
Media State . . . . . : Media disconnecte
Connection-specific DNS Suffix . : dlink.com.tw
Tunnel adapter Local Area Connection* 6:
Connection-specific DNS Suffix . :
IPv6 Address. . . . . : 2001:0:4136:e38a:

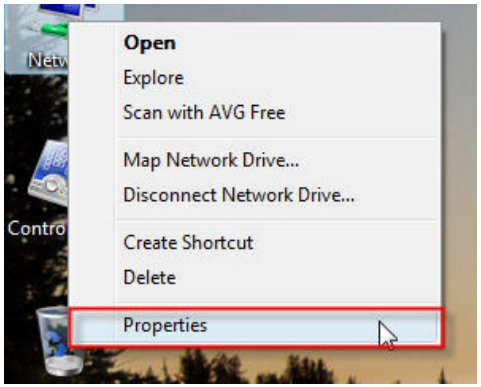
10. To test the new IP address, use the Ping feature of the command prompt.


C:\Windows\system32\cmd.exe - ping 192.168.0.1 -t
C:\Users\Ryan>ping 192.168.0.1 -t
Pinging 192.168.0.1 with 32 bytes of data:
Reply from 192.168.0.1: bytes=32 time=3ms TTL=64
Reply from 192.168.0.1: bytes=32 time=2ms TTL=64
Reply from 192.168.0.1: bytes=32 time=2ms TTL=64
Reply from 192.168.0.1: bytes=32 time=1ms TTL=64
Reply from 192.168.0.1: bytes=32 time=5ms TTL=64

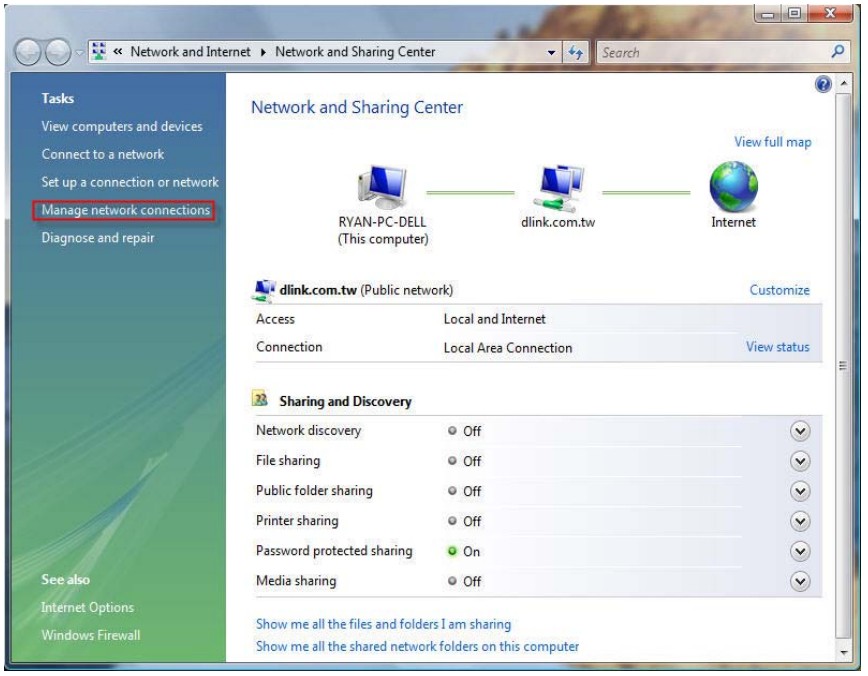
Connecting to an Unsecured Wireless Network

The following are step-by-step directions to set up an unsecured wireless connection.

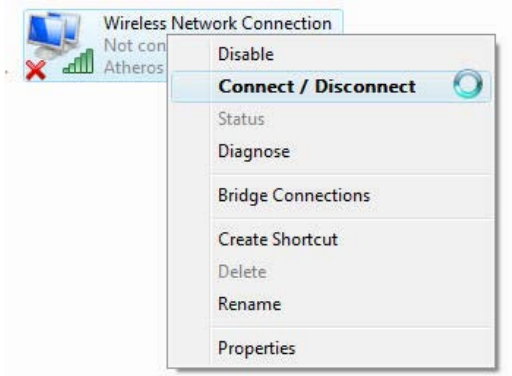
1. Click on **Properties**.



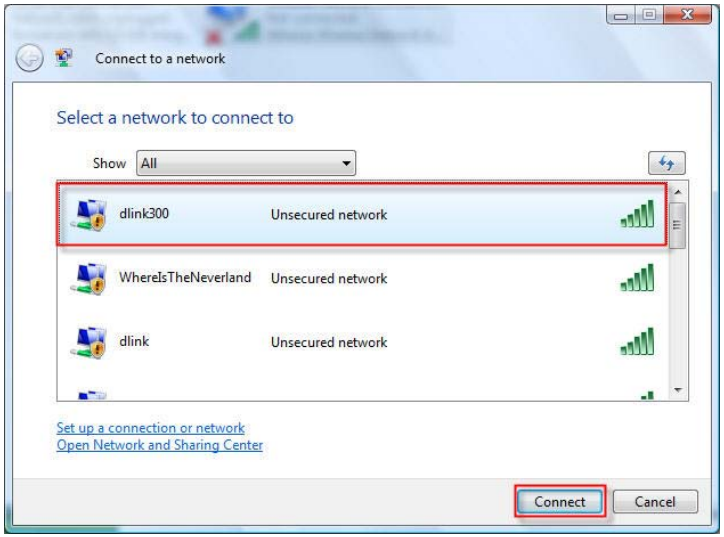
2. Go to the **Network and Sharing Center** window and click the **Manage Network Connections** link.



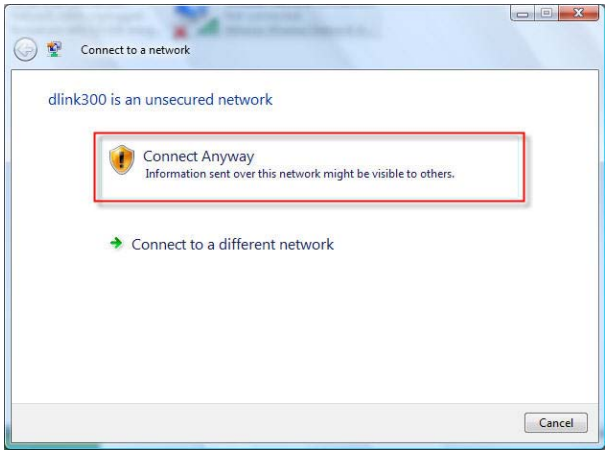
3. Right-click the **Wireless Network Connection** entry and then select **Connect/Disconnect** from the drop-down menu.



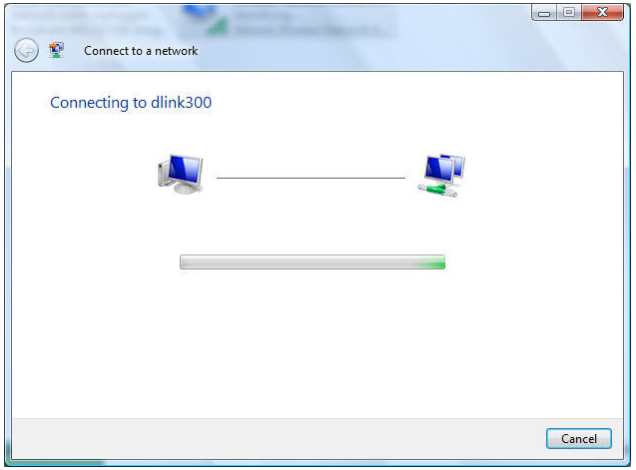
4. Select a network to connect to in the **Select a network to connect to** window in the **Connect to a network** wizard and then click the **Connect** button.



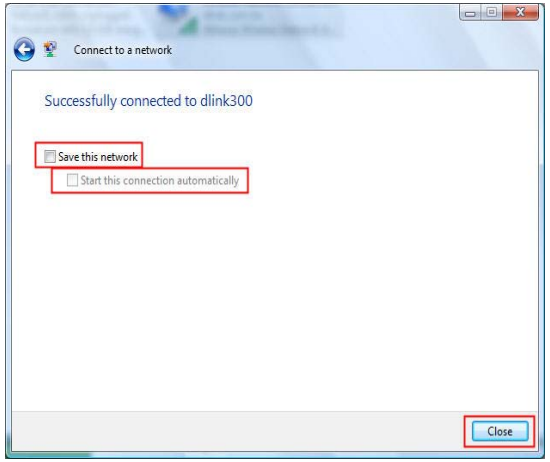
5. Confirm your desire to connect anyway on the following **Network Connection Status** window.


Connect to a network
dlink300 is an unsecured network
Connect Anyway
Information sent over this network might be visible to others.
Connect to a different network
Cancel

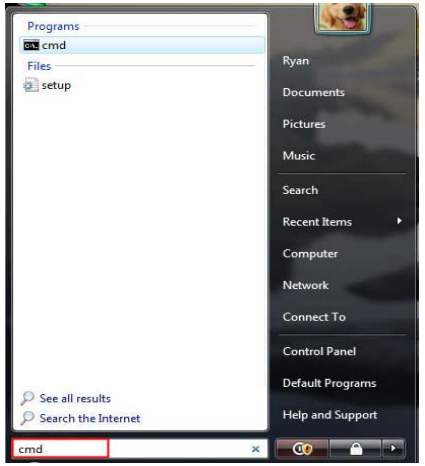
6. The following **Connect to a network** wizard window displays the system progress.



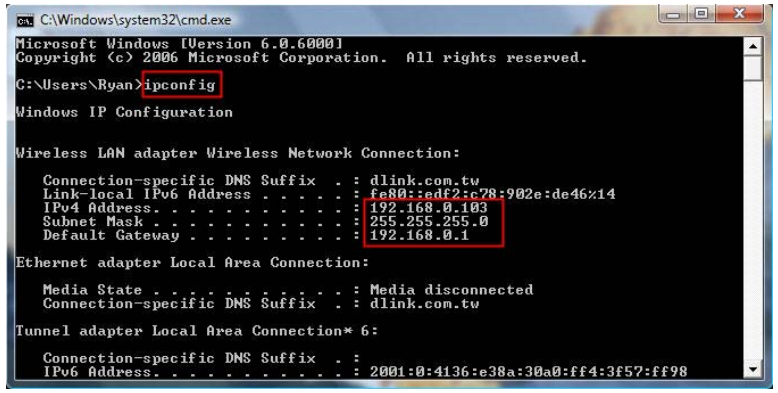
7. The following **Successfully connected to dlink300** window in the **Connect to a network** wizard is displayed. Choose to save to the network and/or start the new connection automatically. When you are finished, click the **Close** button.



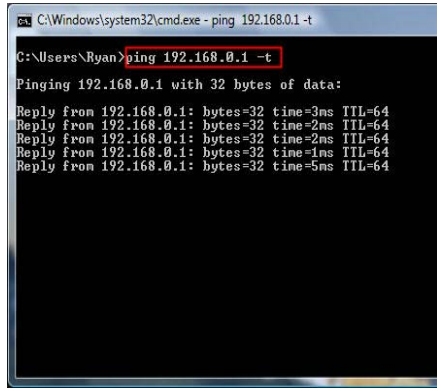
8. The successful connection is displayed at the bottom of the Windows start up menu.



9. Confirm your new settings by calling up the command prompt and then entering the ipconfig command.


C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.0.6000]
Copyright (c) 2006 Microsoft Corporation. All rights reserved.
C:\Users\Ryan>ipconfig
Windows IP Configuration
Wireless LAN adapter Wireless Network Connection:
Connection-specific DNS Suffix . : dlink.com.tw
Link-local IPv6 Address . . . . . : fe80::edf2:c78:902e:de46%14
IPv4 Address. . . . . : 192.168.0.103
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.0.1
Ethernet adapter Local Area Connection:
Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . : dlink.com.tw
Tunnel adapter Local Area Connection* 6:
Connection-specific DNS Suffix . :
IPv6 Address. . . . . : 2001:0:4136:e38a:30a0:ff4:3f57:ff98

10. To test the new IP address, use the Ping feature of the command prompt.

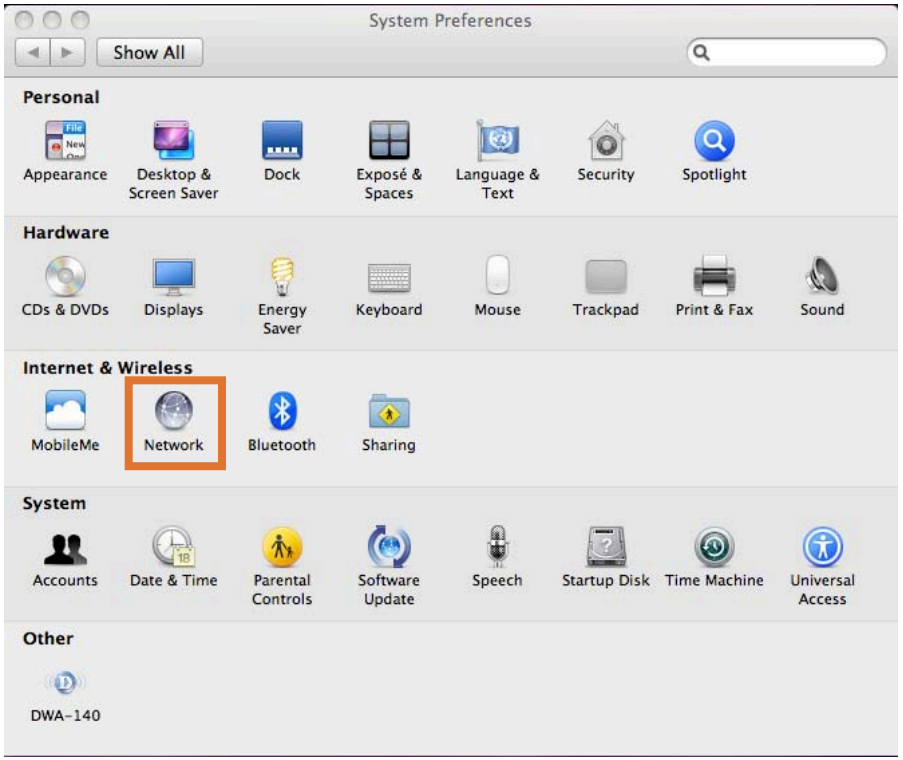

C:\Windows\system32\cmd.exe - ping 192.168.0.1 -t
C:\Users\Ryan>ping 192.168.0.1 -t
Pinging 192.168.0.1 with 32 bytes of data:
Reply from 192.168.0.1: bytes=32 time=3ms TTL=64
Reply from 192.168.0.1: bytes=32 time=2ms TTL=64
Reply from 192.168.0.1: bytes=32 time=2ms TTL=64
Reply from 192.168.0.1: bytes=32 time=1ms TTL=64
Reply from 192.168.0.1: bytes=32 time=5ms TTL=64

Configuring the Network in MAC OS X Snow Leopard (10.6)

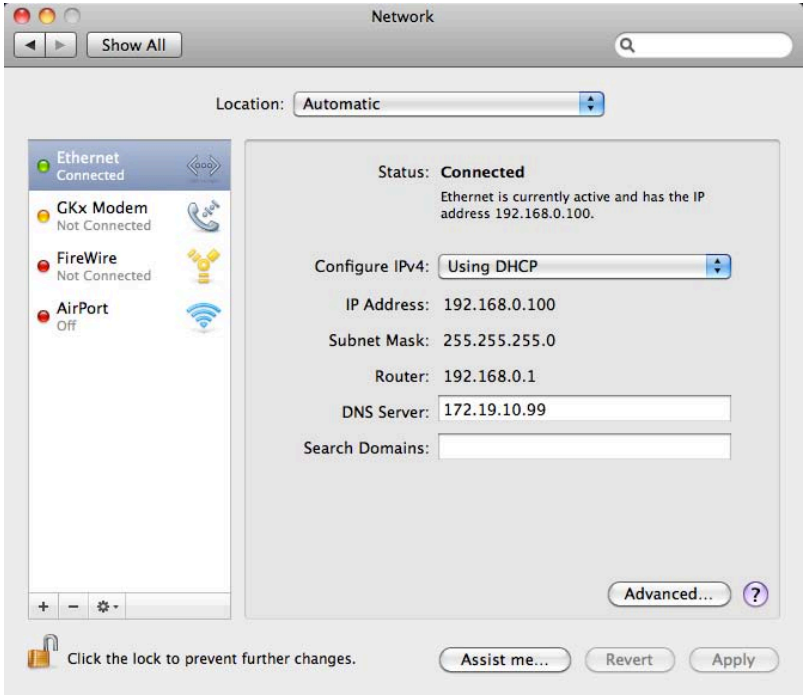
The following are step-by-step directions to configure the network in MAC OS X Snow Leopard (10.6).

1. Click the icon in your Dock to open your System Preferences window.

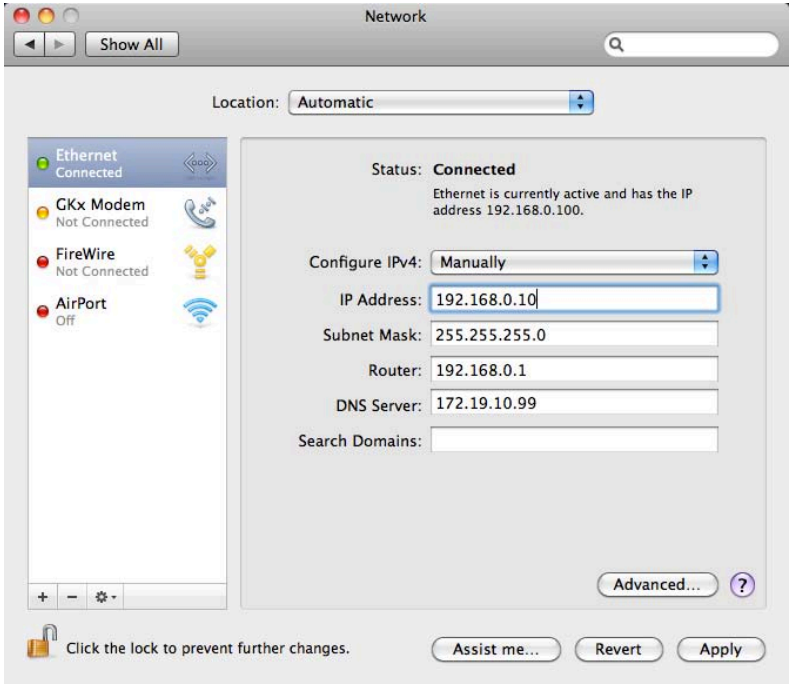
2. Click the **Network** icon in System Preferences menu to view the Network menu.



3. Click **Ehternet** on the left to see the local network settings. TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e. wireless router) automatically. The IP address, its subnet mask and the router's IP address displays when selecting **Using DHCP** from the **Configure IPv4** drop-down menu.



If you are not using a DHCP capable gateway/router, or you need to assign a static IP address, select **Manually** from the **Configure IPv4** drop-down menu to manually enter the IP address and it's subnet mask.



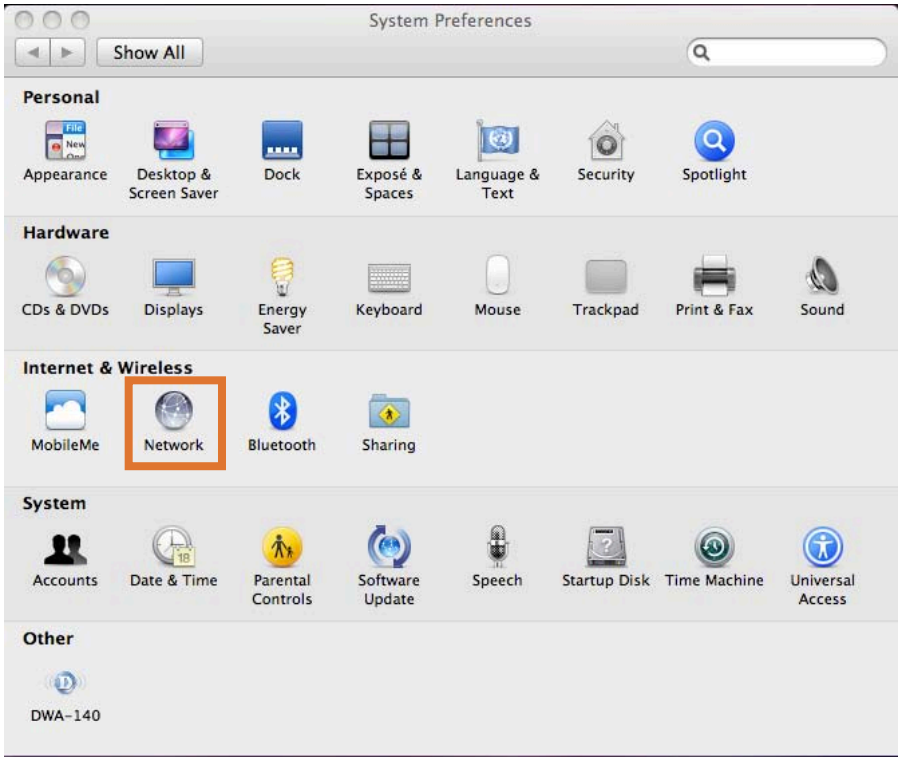
Click the **Apply** button to save the settings.

Configuring the Wireless Network in MAC OS X Snow Leopard (10.6)

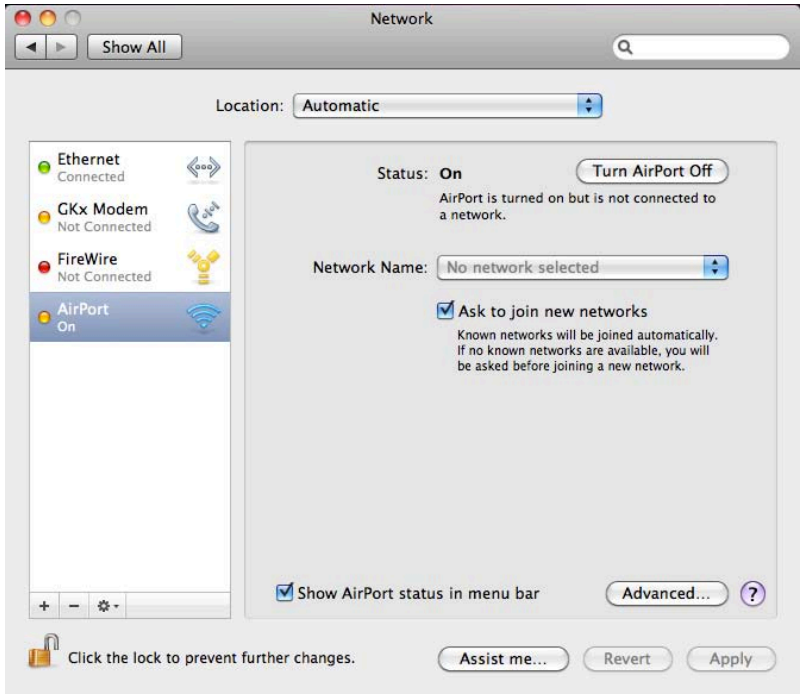
The following are step-by-step directions to configure the Wireless in MAC OS X Snow Leopard (10.6).

1. Click the icon in your Dock to open your System Preferences window.

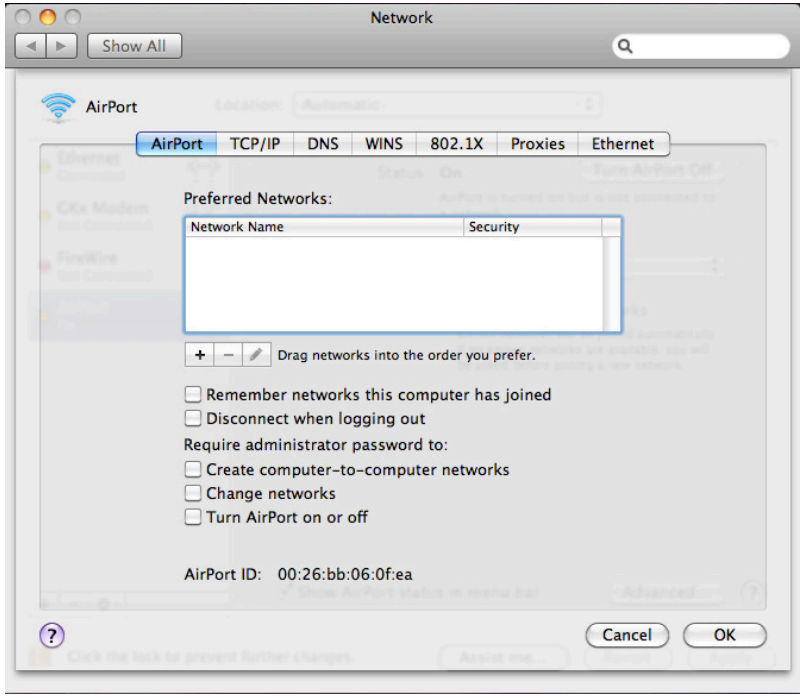
2. Click the **Network** icon in System Preferences menu to view the Network menu.



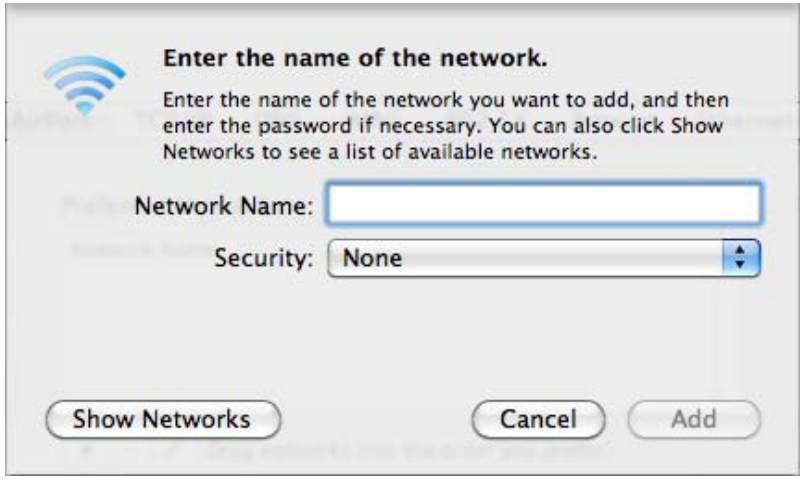
3. Click AirPort on the left to configure the wireless network.
4. Make sure the **Status** is **On**. If the Status is Off, click the **Turn AirPort On** button to enable AirPort.



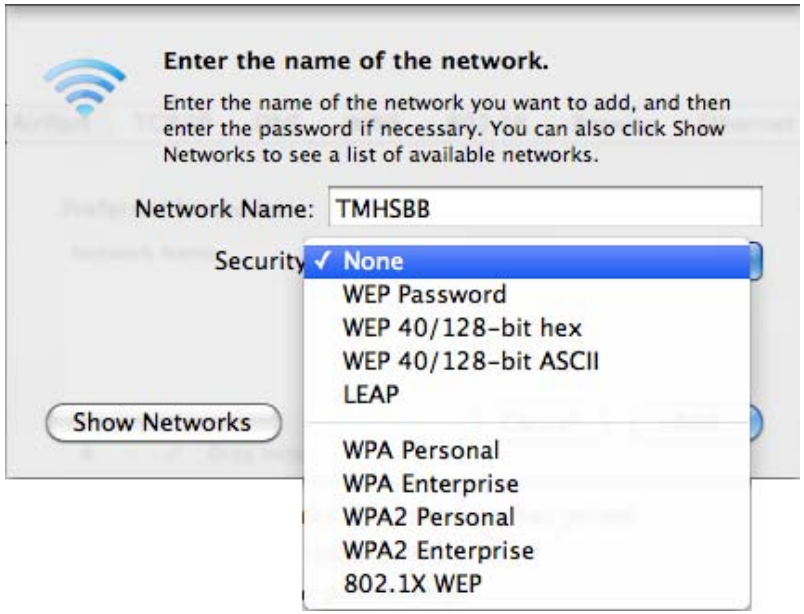
5. Click the **Advanced** button to see the window.
6. Click the **+** button to see the window in the next page.



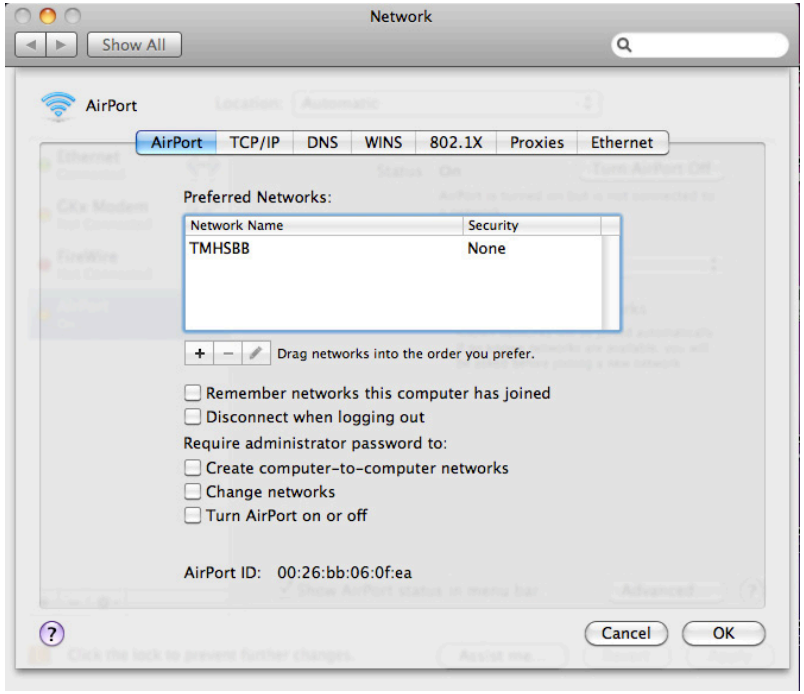
7. Enter the Network Name (SSID) of the Router.


Enter the name of the network.
Enter the name of the network you want to add, and then enter the password if necessary. You can also click Show Networks to see a list of available networks.
Network Name:
Security:
None
Show Networks
Cancel
Add

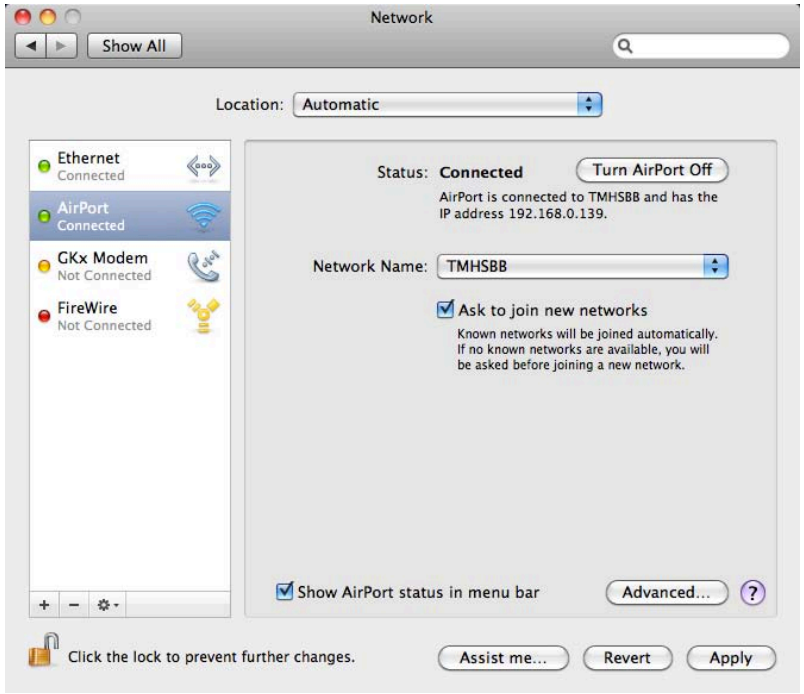
8. Select the Security type of the network from the drop-down list, and security related information below.
   Click the **Add** button to add the wireless network in the Preferred Network list.



9. Click **OK** to proceed.



10. Select the **Network Name** from the drop-down menu.
11. Click the **Apply** button to save the settings.



Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DIR-615. Read the following descriptions if you are having problems. (The examples below are illustrated in Windows® XP. If you have a different operating system, the screenshots on your computer will look similar to the following examples.)

1. Why can't I access the web-based configuration utility?

When entering the IP address of the D-Link router (192.168.0.1 for example), you are not connecting to a website on the Internet or have to be connected to the Internet. The device has the utility built-in to a ROM chip in the device itself. Your computer must be on the same IP subnet to connect to the web-based utility.

- Make sure you have an updated Java-enabled web browser. We recommend the following:
    - Internet Explorer 6.0 or higher
    - Netscape 8 or higher
    - Mozilla 1.7.12 (5.0) or higher
    - Opera 8.5 or higher
    - Safari 1.2 or higher (with Java 1.3.1 or higher)
    - Camino 0.8.4 or higher
    - Firefox 1.5 or higher

- Verify physical connectivity by checking for solid link lights on the device. If you do not get a solid link light, try using a different cable or connect to a different port on the device if possible. If the computer is turned off, the link light may not be on.

- Disable any internet security software running on the computer. Software firewalls such as Zone Alarm, Black Ice, Sygate, Norton Personal Firewall, and Windows® XP firewall may block access to the configuration pages. Check the help files included with your firewall software for more information on disabling or configuring it.

- Configure your Internet settings:

    - Go to **Start** > **Settings** > **Control Panel**. Double-click the **Internet Options** Icon. From the **Security** tab, click the button to restore the settings to their defaults.

    - Click the **Connection** tab and set the dial-up option to Never Dial a Connection. Click the **LAN Settings** button. Make sure nothing is checked. Click **OK**.

    - Go to the **Advanced** tab and click the button to restore these settings to their defaults. Click **OK** three times.

    - Close your web browser (if open) and open it.

- Access the web management. Open your web browser and enter the IP address of your D-Link router in the address bar. This should open the login page for your the web management.

- If you still cannot access the configuration, unplug the power to the router for 10 seconds and plug back in. Wait about 30 seconds and try accessing the configuration. If you have multiple computers, try connecting using a different computer.

2. What can I do if I forgot my password?

If you forgot your password, you must reset your router. Unfortunately this process will change all your settings back to the factory defaults.

To reset the router, locate the reset button (hole) on the rear panel of the unit. With the router powered on, use a paperclip to hold the button down for 10 seconds. Release the button and the router will go through its reboot process. Wait about 30 seconds to access the router. The default IP address is 192.168.0.1. When logging in, the username is **admin** and leave the password box empty.

3. Why can't I connect to certain sites or send and receive emails when connecting through my router?

If you are having a problem sending or receiving email, or connecting to secure sites such as eBay, banking sites, and Hotmail, we suggest lowering the MTU in increments of ten (Ex. 1492, 1482, 1472, etc).

Note: AOL DSL+ users must use MTU of 1400.

To find the proper MTU Size, you'll have to do a special ping of the destination you're trying to go to. A destination could be another computer, or a URL.

- Click on **Start** and then click **Run**.
- Windows® 95, 98, and Me users type in **command** (Windows® NT, 2000, and XP users type in **cmd**) and press **Enter** (or click **OK**).
- Once the window opens, you'll need to do a special ping. Use the following syntax:

  ping [url] [-f] [-l] [MTU value]

Example: **ping yahoo.com -f -l 1472**

```
C:\>ping yahoo.com -f -l 1482

Pinging yahoo.com [66.94.234.13] with 1482 bytes of data:

Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.
Packet needs to be fragmented but DF set.

Ping statistics for 66.94.234.13:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum =  0ms, Average =  0ms

C:\>ping yahoo.com -f -l 1472

Pinging yahoo.com [66.94.234.13] with 1472 bytes of data:

Reply from 66.94.234.13: bytes=1472 time=93ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=109ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=125ms TTL=52
Reply from 66.94.234.13: bytes=1472 time=203ms TTL=52

Ping statistics for 66.94.234.13:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 93ms, Maximum =  203ms, Average =  132ms

C:\>
```

You should start at 1472 and work your way down by 10 each time. Once you get a reply, go up by 2 until you get a fragmented packet. Take that value and add 28 to the value to account for the various TCP/IP headers. For example, lets say that 1452 was the proper value, the actual MTU size would be 1480, which is the optimum for the network we're working with (1452+28=1480).

Once you find your MTU, you can now configure your router with the proper MTU size.

To change the MTU rate on your router follow the steps below:

- Open your browser, enter the IP address of your router (192.168.0.1) and click **OK**.
- Enter your username (admin) and password (blank by default). Click **OK** to enter the web configuration page for the device.
- Click on **Setup** and then click **Manual Configure**.
- To change the MTU enter the number in the MTU field and click the **Save Settings** button to save your settings.
- Test your email. If changing the MTU does not resolve the problem, continue changing the MTU in increments of ten.

Wireless Basics

D-Link wireless products are based on industry standards to provide easy-to-use and compatible high-speed wireless connectivity within your home, business or public access wireless networks. Strictly adhering to the IEEE standard, the D-Link wireless family of products will allow you to securely access the data you want, when and where you want it. You will be able to enjoy the freedom that wireless networking delivers.

A wireless local area network (WLAN) is a cellular computer network that transmits and receives data with radio signals instead of wires. Wireless LANs are used increasingly in both home and office environments, and public areas such as airports, coffee shops and universities. Innovative ways to utilize WLAN technology are helping people to work and communicate more efficiently. Increased mobility and the absence of cabling and other fixed infrastructure have proven to be beneficial for many users.

Wireless users can use the same applications they use on a wired network. Wireless adapter cards used on laptop and desktop systems support the same protocols as Ethernet adapter cards.

Under many circumstances, it may be desirable for mobile network devices to link to a conventional Ethernet LAN in order to use servers, printers or an Internet connection supplied through the wired LAN. A Wireless Router is a device used to provide this link.

What is Wireless?

Wireless or Wi-Fi technology is another way of connecting your computer to the network without using wires. Wi-Fi uses radio frequency to connect wirelessly, so you have the freedom to connect computers anywhere in your home or office network.

Why D-Link Wireless?

D-Link is the worldwide leader and award winning designer, developer, and manufacturer of networking products. D-Link delivers the performance you need at a price you can afford. D-Link has all the products you need to build your network.

How does wireless work?

Wireless works similar to how cordless phone work, through radio signals to transmit data from one point A to point B. But wireless technology has restrictions as to how you can access the network. You must be within the wireless network range area to be able to connect your computer. There are two different types of wireless networks Wireless Local Area Network (WLAN), and Wireless Personal Area Network (WPAN).

Why is the speed of my Wireless N device limited to 54mbps?

This is likely to be the result of the wireless settings. Go to **Advanced** -> **Advanced Wireless** to see if the Wireless Mode is configured as 802.11n only. As the Wi-Fi Alliance restricts the maximum speed to 54Mbps when WPA or WPA2 wireless security is configured with TKIP Cipher Type, go to **Setup** -> **Wireless Setup** to make sure the Cipher Type is configured as AES.

Wireless Local Area Network (WLAN)

In a wireless local area network, a device called an Access Point (AP) connects computers to the network. The access point has a small antenna attached to it, which allows it to transmit data back and forth over radio signals. With an indoor access point as seen in the picture, the signal can travel up to 300 feet. With an outdoor access point the signal can reach out up to 30 miles to serve places like manufacturing plants, industrial locations, college and high school campuses, airports, golf courses, and many other outdoor venues.

Wireless Personal Area Network (WPAN)

Bluetooth is the industry standard wireless technology used for WPAN. Bluetooth devices in WPAN operate in a range up to 30 feet away.

Compared to WLAN the speed and wireless operation range are both less than WLAN, but in return it doesn't use nearly as much power which makes it ideal for personal devices, such as mobile phones, PDAs, headphones, laptops, speakers, and other devices that operate on batteries.

Who uses wireless?

Wireless technology as become so popular in recent years that almost everyone is using it, whether it's for home, office, business, D-Link has a wireless solution for it.

Home

- Gives everyone at home broadband access
- Surf the web, check e-mail, instant message, and etc
- Gets rid of the cables around the house
- Simple and easy to use

Small Office and Home Office

- Stay on top of everything at home as you would at office
- Remotely access your office network from home
- Share Internet connection and printer with multiple computers
- No need to dedicate office space

Where is wireless used?

Wireless technology is expanding everywhere not just at home or office. People like the freedom of mobility and it's becoming so popular that more and more public facilities now provide wireless access to attract people. The wireless connection in public places is usually called "hotspots".

Using a D-Link Cardbus Adapter with your laptop, you can access the hotspot to connect to Internet from remote locations like airports, hotels, coffee shops, libraries, restaurants, and convention centers.

Wireless network is easy to setup, but if you're installing it for the first time it could be quite a task not knowing where to start. That's why we've put together a few setup steps and tips to help you through the process of setting up a wireless network.

Tips

Here are a few things to keep in mind, when you install a wireless network.

Centralize your router or Access Point

Make sure you place the router/access point in a centralized location within your network for the best performance. Try to place the router/access point as high as possible in the room, so the signal gets dispersed throughout your home. If you have a two-story home, you may need a repeater to boost the signal to extend the range.
For the wireless repeater, there are two types of repeater in D-Link for user to select:

- Universal repeater: It acts as an AP and a wireless STA at the same time. It can support all AP and wireless STA if they work in the same wireless channel.
- AP-repeater (AP with WDS): only repeat same model or limited models which base on the same proprietary protocol.

Please choose a universal repeater to boost the signal to extend the range.

Wireless Modes

Eliminate Interference

Place home appliances such as cordless telephones, microwaves, and televisions as far away as possible from the router/access point. This would significantly reduce any interference that the appliances might cause since they operate on same frequency.

Security

Don't let you next-door neighbors or intruders connect to your wireless network. Secure your wireless network by turning on the WPA or WEP security feature on the router. Refer to product manual for detail information on how to set it up.

There are basically two modes of networking:

- **Infrastructure** – All wireless clients will connect to an access point or wireless router.
- **Ad-Hoc** – Directly connecting to another computer, for peer-to-peer communication, using wireless network adapters on each computer, such as two or more WNA-2330 wireless network Cardbus adapters.

An Infrastructure network contains an Access Point or wireless router. All the wireless devices, or clients, will connect to the wireless router or access point.

An Ad-Hoc network contains only clients, such as laptops with wireless cardbus adapters. All the adapters must be in Ad-Hoc mode to communicate.

Networking Basics

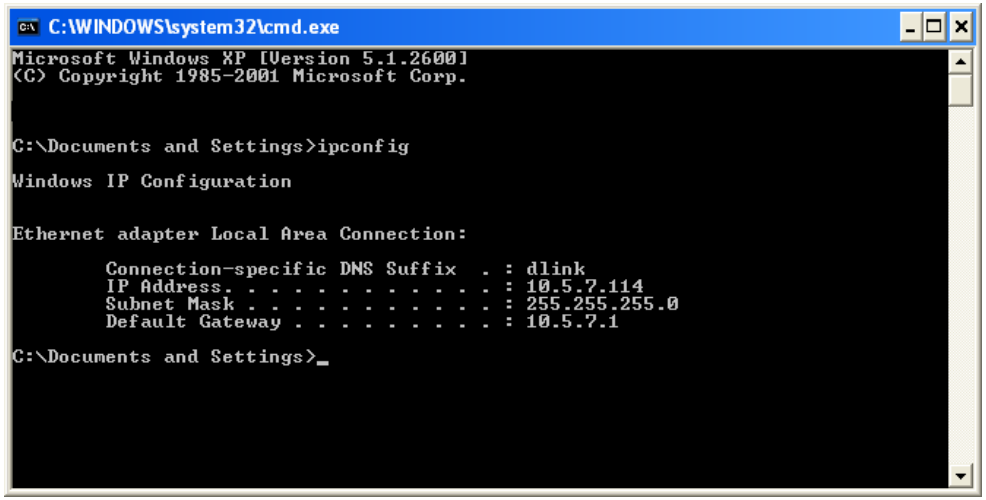
Check your IP address

After you install your new D-Link adapter, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e. wireless router) automatically. To verify your IP address, please follow the steps below.

Click on **Start** > **Run**. In the run box type ***cmd*** and click **OK**.

At the prompt, type ***ipconfig*** and press **Enter**.

This will display the IP address, subnet mask, and the default gateway of your adapter.


C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
C:\Documents and Settings>ipconfig
Windows IP Configuration
Ethernet adapter Local Area Connection:
Connection-specific DNS Suffix . : dlink
IP Address. . . . . : 10.5.7.114
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 10.5.7.1
C:\Documents and Settings>

If the address is 0.0.0.0, check your adapter installation, security settings, and the settings on your router. Some firewall software programs may block a DHCP request on newly installed adapters.

If you are connecting to a wireless network at a hotspot (e.g. hotel, coffee shop, airport), please contact an employee or administrator to verify their wireless network settings.

Statically Assign an IP address

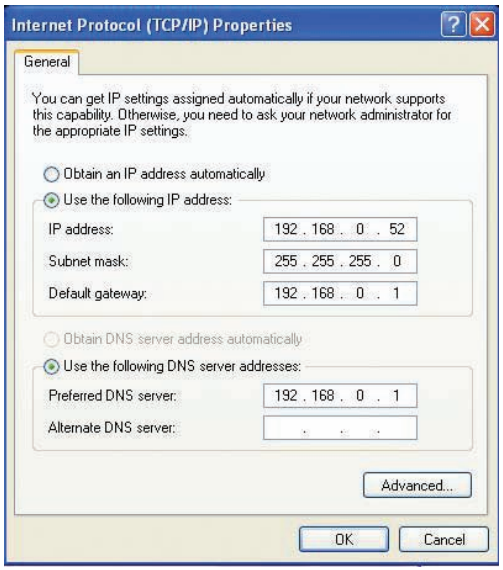
If you are not using a DHCP capable gateway/router, or you need to assign a static IP address, please follow the steps below:

Step 1
Windows® XP - Click on **Start** > **Control Panel** > **Network Connections**.
Windows® 2000 - From the desktop, right-click **My Network Places** > **Properties**.

Step 2
Right-click on the **Local Area Connection** which represents your D-Link network adapter and select **Properties**.

Step 3
Highlight **Internet Protocol (TCP/IP)** and click **Properties**.

Step 4
Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or the LAN IP address on your router.


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 192 . 168 . 0 . 52
Subnet mask: 255 . 255 . 255 . 0
Default gateway: 192 . 168 . 0 . 1
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server: 192 . 168 . 0 . 1
Alternate DNS server:
Advanced...
OK
Cancel

Example: If the router´s LAN IP address is 192.168.0.1, make your IP address 192.168.0.X where X is a number between 2 and 99. Make sure that the number you choose is not in use on the network. Set Default Gateway the same as the LAN IP address of your router (192.168.0.1).

Set Primary DNS the same as the LAN IP address of your router (192.168.0.1). The Secondary DNS is not needed or you may enter a DNS server from your ISP.

Step 5
Click **OK** twice to save your settings.

Technical Specifications

Standards

- IEEE 802.11g
- IEEE 802.11b
- IEEE 802.11n draft 2.0
- IEEE 802.3
- IEEE 802.3u
-

Wireless Signal Rates*

- 300Mbps
- 54Mbps
- 48Mbps
- 36Mbps
- 24Mbps
- 18Mbps
- 12Mbps
- 11Mbps
- 9Mbps
- 6Mbps
- 5.5Mbps
- 2Mbps
- 1Mbps

Security

- WPA - Wi-Fi Protected Access (TKIP, MIC, IV Expansion, Shared Key Authentication)
- 802.1x
- 64/128-bit WEP
- PIN/PBC WPS

Modulation Technology

802.11 b : DSSS / DBPSK / DQPSK / CCK
802.11 g : 16QAM / 64QAM / BPSK / QPSK with OFDM
802.11 n : 16QAM / 64QAM / BPSK / QPSK with OFDM

Receiver Sensitivity

802.11n

HT20

- 300Mbps OFDM, 10% PER, –68dBm

HT40

- 300Mbps OFDM, 10% PER, –64dBm

802.11b and 802.11g

- 54Mbps OFDM, 10% PER,-70dBm
- 48Mbps OFDM, 10% PER,-72dBm
- 36Mbps OFDM, 10% PER,-76dBm
- 24Mbps OFDM, 10% PER,-78dBm
- 18Mbps OFDM, 10% PER,-80dBm
- 12Mbps OFDM, 10% PER,-83dBm
- 11Mbps CCK, 8% PER,-85dBm
- 9Mbps OFDM, 10% PER,-85dBm
- 6Mbps OFDM, 10% PER,-88dBm
- 5.5Mbps CCK, 8% PER,-87dBm
- 2Mbps DQPSK, 8% PER,-89dBm
- 1Mbps DBPSK, 8% PER,-90dBm

VPN Pass Through/ Multi-Sessions

- PPTP
- IPSec

Device Management

- Web-based Internet Explorer v6 or later; Netscape Navigator v6 or later; or other Java-enabled browsers
- DHCP Server and Client

Wireless Frequency Range
2.4GHz to 2.497GHz (802.11b)
2.4GHz to 2.4835GHZ (802.11g and 802.11n)

Wireless Operating Range2
- Indoors - up to 328 ft. (100 meters)
- Outdoors- up to 1312 ft. (400 meters)

Wireless Transmit Power (AVG Power)
11b:17dBm(Max) 11g:16dBm(Max) 11n:13dBm(Max)

External Antenna Type
Two fixed reverse SMA external antenna

Advanced Firewall Features
- NAT with VPN Pass-through (Network Address Translation)
- MAC Filtering
- IP Filtering
- URL Filtering
- Domain Blocking
- Scheduling

Operating Temperature
32°F to 129 °F (0°C to 40°C)

Humidity
95% maximum (non-condensing)

Safety and Emissions
FCC Part 15B/ 15C/ MPE
IC RSS-210
NCC LP0002

LEDs
- Power
- Status
- Internet
- WLAN (Wireless Connection)
- LAN (10/100)

Dimensions
- L = 135mm
- W = 99.8mm
- H = 31.5mm

Weight
0.246kg

* Maximum wireless signal rate derived from IEEE Standard 802.11b, 802.11g and 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental factors will adversely affect wireless signal range.